

SEQUENCE LISTING

<110> Kasibhatla, Shailaja
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Kuemmerle, Jared

<120> Methods of Treating Diseases Responsive to Induction of Apoptosis
and Screening Assays

<130> 1735.0840002

<150> US 60/484,750
<151> 2003-07-07

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<151> 2003-04-18

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<170> PatentIn version 3.2

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Asp Asn Asn Thr Lys Ala Asn Val Thr Lys Pro Lys Arg Cys Ser Gly
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Ser Ile Cys Tyr Gly Thr Ile Ala Val Ile Val Phe Phe Leu Ile Gly

Phe Met Ile Gly Tyr Leu Gly Tyr Cys Lys Gly Val Glu Pro Lys Thr
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 Glu Cys Glu Arg Leu Ala Gly Thr Glu Ser Pro Val Arg Glu Glu Pro
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 Gly Glu Asp Phe Pro Ala Ala Arg Arg Leu Tyr Trp Asp Asp Leu Lys
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 Lys Leu Leu Asn Glu Asn Ser Tyr Val Pro Arg Glu Ala Gly Ser Gln
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 Lys Asp Glu Asn Leu Ala Leu Tyr Val Glu Asn Gln Phe Arg Glu Phe
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 Lys Leu Ser Lys Val Trp Arg Asp Gln His Phe Val Lys Ile Gln Val
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 Val Arg Ala Gly Lys Ile Thr Phe Ala Glu Lys Val Ala Asn Ala Glu
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Ile Glu Arg Ile Pro Glu Leu Asn Lys Val Ala Arg Ala Ala Ala Glu
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Val Ala Gly Gln Phe Val Ile Lys Leu Thr His Asp Val Glu Leu Asn
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Leu Asn Gln Tyr Arg Ala Asp Ile Lys Glu Met Gly Leu Ser Leu Gln
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Trp Leu Tyr Ser Ala Arg Gly Asp Phe Phe Arg Ala Thr Ser Arg Leu
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Thr Thr Asp Phe Gly Asn Ala Glu Lys Thr Asp Arg Phe Val Met Lys
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Lys Leu Asn Asp Arg Val Met Arg Val Glu Tyr His Phe Leu Ser Pro
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Tyr Val Ser Pro Lys Glu Ser Pro Phe Arg His Val Phe Trp Gly Ser
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Gln Asn Asn Gly Ala Phe Asn Glu Thr Leu Phe Arg Asn Gln Leu Ala
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Val Trp Asp Ile Asp Asn Glu Phe
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Asp Asn Asn Thr Lys Ala Asn Val Thr Lys Pro Lys Arg Cys Ser Gly
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Ser Ile Cys Tyr Gly Thr Ile Ala Val Ile Val Phe Phe Leu Ile Gly
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Gly Glu Asp Phe Pro Ala Ala Arg Arg Leu Tyr Trp Asp Asp Leu Lys
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Arg Lys Leu Ser Glu Lys Leu Asp Ser Thr Asp Phe Thr Gly Thr Ile
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Lys Asp Glu Asn Leu Ala Leu Tyr Val Glu Asn Gln Phe Arg Glu Phe
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Ala Ala Thr Val Thr Gly Lys Leu Val His Ala Asn Phe Gly Thr Lys
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Val Arg Ala Gly Lys Ile Thr Phe Ala Glu Lys Val Ala Asn Ala Glu

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Tyr	Ile	Asn	Leu	Asp	Lys	Ala	Val	Leu	Gly	Thr	Ser	Asn	Phe	Lys	Val
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Ser	Ala	Ser	Pro	Leu	Leu	Tyr	Thr	Leu	Ile	Glu	Lys	Thr	Met	Gln	Asn
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Val Lys His Pro Val Thr Gly Gln Phe Leu Tyr Gln Asp Ser Asn Trp
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Ala Ser Lys Val Glu Lys Leu Thr Leu Asp Asn Ala Ala Phe Pro Phe
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Thr Asp Tyr Pro Tyr Leu Gly Thr Thr Met Asp Thr Tyr Lys Glu Leu
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Ile Glu Arg Ile Pro Glu Leu Asn Lys Val Ala Arg Ala Ala Glu
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Val Ala Gly Gln Phe Val Ile Lys Leu Thr His Asp Val Glu Leu Asn
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Leu Asp Tyr Glu Arg Tyr Asn Ser Gln Leu Leu Ser Phe Val Arg Asp
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Thr Thr Asp Phe Gly Asn Ala Glu Lys Thr Asp Arg Phe Val Met Lys
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Lys Leu Asn Asp Arg Val Met Arg Val Glu Tyr His Phe Leu Ser Pro
675 680 685

Tyr Val Ser Pro Lys Glu Ser Pro Phe Arg His Val Phe Trp Gly Ser
690 695 700

Gly Ser His Thr Leu Pro Ala Leu Leu Glu Asn Leu Lys Leu Arg Lys
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Gln Asn Asn Gly Ala Phe Asn Glu Thr Leu Phe Arg Asn Gln Leu Ala
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Asn Ser His Val Glu Met Lys Leu Ala Val Asp Glu Glu Glu Asn Ala
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Asp Asn Asn Thr Lys Ala Asn Val Thr Lys Pro Lys Arg Cys Ser Gly
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Ser Ile Cys Tyr Gly Thr Ile Ala Val Ile Val Phe Phe Leu Ile Gly
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Phe Met Ile Gly Tyr Leu Gly Tyr Cys Lys Gly Val Glu Pro Lys Thr
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Glu Cys Glu Arg Leu Ala Gly Thr Glu Ser Pro Val Arg Glu Glu Pro
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Gly Glu Asp Phe Pro Ala Ala Arg Arg Leu Tyr Trp Asp Asp Leu Lys
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Arg Lys Leu Ser Glu Lys Leu Asp Ser Thr Asp Phe Thr Gly Thr Ile
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Lys Leu Leu Asn Glu Asn Ser Tyr Val Pro Arg Glu Ala Gly Ser Gln
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Lys Asp Glu Asn Leu Ala Leu Tyr Val Glu Asn Gln Phe Arg Glu Phe
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Lys Leu Ser Lys Val Trp Arg Asp Gln His Phe Val Lys Ile Gln Val
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Lys Asp Ser Ala Gln Asn Ser Val Ile Ile Val Asp Lys Asn Gly Arg

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Val Arg Ala Gly Lys Ile Thr Phe Ala Glu Lys Val Ala Asn Ala Glu 260 265 270		
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Leu Asp Tyr Glu Arg Tyr Asn Ser Gln Leu Leu Ser Phe Val Arg Asp
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Leu Asn Gln Tyr Arg Ala Asp Ile Lys Glu Met Gly Leu Ser Leu Gln
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Trp Leu Tyr Ser Ala Arg Gly Asp Phe Phe Arg Ala Thr Ser Arg Leu
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Thr Thr Asp Phe Gly Asn Ala Glu Lys Thr Asp Arg Phe Val Met Lys
660 665 670

Lys Leu Asn Asp Arg Val Met Arg Val Glu Tyr His Phe Leu Ser Pro
675 680 685

Tyr Val Ser Pro Lys Glu Ser Pro Phe Arg His Val Phe Trp Gly Ser
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Gly Ser His Thr Leu Pro Ala Leu Leu Glu Asn Leu Lys Leu Arg Lys
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Gln Asn Asn Gly Ala Phe Asn Glu Thr Leu Phe Arg Asn Gln Leu Ala
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Asp Asn Asn Thr Lys Ala Asn Val Thr Lys Pro Lys Arg Cys Ser Gly
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Ser Ile Cys Tyr Gly Thr Ile Ala Val Ile Val Phe Phe Leu Ile Gly
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Phe Met Ile Gly Tyr Leu Gly Tyr Cys Lys Gly Val Glu Pro Lys Thr
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Lys Leu Ser Lys Val Trp Arg Asp Gln His Phe Val Lys Ile Gln Val 180 185 190		
Lys Asp Ser Ala Gln Asn Ser Val Ile Ile Val Asp Lys Asn Gly Arg 195 200 205		
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Ala Ala Thr Val Thr Gly Lys Leu Val His Ala Asn Phe Gly Thr Lys 225 230 235 240		
Lys Asp Phe Glu Asp Leu Tyr Thr Pro Val Asn Gly Ser Ile Val Ile 245 250 255		
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Ser Leu Asn Ala Ile Gly Val Leu Ile Tyr Met Asp Gln Thr Lys Phe 275 280 285		
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Ile Ser Arg Ala Ala Ala Glu Lys Leu Phe Gly Asn Met Glu Gly Asp 340 345 350		
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Glu Ser Lys Asn Val Lys Leu Thr Val Ser Asn Val Leu Lys Glu Ile 370 375 380		

Lys Ile Leu Asn Ile Phe Gly Val Ile Lys Gly Phe Val Glu Pro Asp
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Phe Ser Asp Met Val Leu Lys Asp Gly Phe Gln Pro Ser Arg Ser Ile
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Ile Phe Ala Ser Trp Ser Ala Gly Asp Phe Gly Ser Val Gly Ala Thr
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Glu Trp Leu Glu Gly Tyr Leu Ser Ser Leu His Leu Lys Ala Phe Thr
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Tyr Ile Asn Leu Asp Lys Ala Val Leu Gly Thr Ser Asn Phe Lys Val
485 490 495

Ser Ala Ser Pro Leu Leu Tyr Thr Leu Ile Glu Lys Thr Met Gln Asn
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Leu Asp Tyr Glu Arg Tyr Asn Ser Gln Leu Leu Ser Phe Val Arg Asp
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Leu Asn Gln Tyr Arg Ala Asp Ile Lys Glu Met Gly Leu Ser Leu Gln
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Trp Leu Tyr Ser Ala Arg Gly Asp Phe Phe Arg Ala Thr Ser Arg Leu
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Thr Thr Asp Phe Gly Asn Ala Glu Lys Thr Asp Arg Phe Val Met Lys
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Lys Leu Asn Asp Arg Val Met Arg Val Glu Tyr His Phe Leu Ser Pro
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Tyr Val Ser Pro Lys Glu Ser Pro Phe Arg His Val Phe Trp Gly Ser
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Gly Ser His Thr Leu Pro Ala Leu Leu Glu Asn Leu Lys Leu Arg Lys
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Gln Asn Asn Gly Ala Phe Asn Glu Thr Leu Phe Arg Asn Gln Leu Ala
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Asp Asn Asn Thr Lys Ala Asn Val Thr Lys Pro Lys Arg Cys Ser Gly
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385 390 395 400

His Tyr Val Val Val Gly Ala Gln Arg Asp Ala Trp Gly Pro Gly Ala
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Ala Lys Ser Gly Val Gly Thr Ala Leu Leu Leu Lys Leu Ala Gln Met
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Phe Ser Asp Met Val Leu Lys Asp Gly Phe Gln Pro Ser Arg Ser Ile
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Ile Phe Ala Ser Trp Ser Ala Gly Asp Phe Gly Ser Val Gly Ala Thr
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Tyr Ile Asn Leu Asp Lys Ala Val Leu Gly Thr Ser Asn Phe Lys Val
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Thr Thr Asp Phe Gly Asn Ala Glu Lys Thr Asp Arg Phe Val Met Lys
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Lys Leu Asn Asp Arg Val Met Arg Val Glu Tyr His Phe Leu Ser Pro
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Tyr Val Ser Pro Lys Glu Ser Pro Phe Arg His Val Phe Trp Gly Ser
690 695 700

Gly Ser His Thr Leu Pro Ala Leu Leu Glu Asn Leu Lys Leu Arg Lys
705 710 715 720

Gln Asn Asn Gly Ala Phe Asn Glu Thr Leu Phe Arg Asn Gln Leu Ala
725 730 735

Leu Ala Thr Trp Thr Ile Gln Gly Ala Ala Asn Ala Leu Ser Gly Asp
740 745 750

Val Trp Asp Ile Asp Asn Glu Phe
755 760

<210> 6
<211> 760
<212> PRT
<213> Homo sapiens

<400> 6

Met Met Asp Gln Ala Arg Ser Ala Phe Ser Asn Leu Phe Gly Gly Glu

1					5					10					15				
Pro	Leu	Ser	Tyr	Thr	Arg	Phe	Ser	Leu	Ala	Arg	Gln	Val	Asp	Gly	Asp				
			20							25				30					
Asn	Ser	His	Val	Glu	Met	Lys	Leu	Ala	Val	Asp	Glu	Glu	Glu	Asn	Ala				
			35							40				45					
Asp	Asn	Asn	Thr	Lys	Ala	Asn	Val	Thr	Lys	Pro	Lys	Arg	Cys	Ser	Gly				
			50							55				60					
Ser	Ile	Cys	Tyr	Gly	Thr	Ile	Ala	Val	Ile	Val	Phe	Phe	Leu	Ile	Gly				
			65										75						
Phe	Met	Ile	Gly	Tyr	Leu	Gly	Tyr	Cys	Lys	Gly	Val	Glu	Pro	Lys	Thr				
						85							90						
Glu	Cys	Glu	Arg	Leu	Ala	Gly	Thr	Glu	Ser	Pro	Val	Arg	Glu	Glu	Pro				
						100							105						
Gly	Glu	Asp	Phe	Pro	Ala	Ala	Arg	Arg	Leu	Tyr	Trp	Asp	Asp	Leu	Lys				
						115							120						
Arg	Lys	Leu	Ser	Glu	Lys	Leu	Asp	Ser	Thr	Asp	Phe	Thr	Ser	Thr	Ile				
						130							135						
Lys	Leu	Leu	Asn	Glu	Asn	Ser	Tyr	Val	Pro	Arg	Glu	Ala	Gly	Ser	Gln				
									145				150						
Lys	Asp	Glu	Asn	Leu	Ala	Leu	Tyr	Val	Glu	Asn	Gln	Phe	Arg	Glu	Phe				
						165							170						
Lys	Leu	Ser	Lys	Val	Trp	Arg	Asp	Gln	His	Phe	Val	Lys	Ile	Gln	Val				
									180				185						
Lys	Asp	Ser	Ala	Gln	Asn	Ser	Val	Ile	Ile	Val	Asp	Lys	Asn	Gly	Arg				
									195										
Leu	Val	Tyr	Leu	Val	Glu	Asn	Pro	Gly	Gly	Tyr	Val	Ala	Tyr	Ser	Lys				
									210										
Ala	Ala	Thr	Val	Thr	Gly	Lys	Leu	Val	His	Ala	Asn	Phe	Gly	Thr	Lys				
									225										
Lys	Asp	Phe	Glu	Asp	Leu	Tyr	Thr	Pro	Val	Asn	Gly	Ser	Ile	Val	Ile				
									245										

Val	Arg	Ala	Gly	Lys	Ile	Thr	Phe	Ala	Glu	Lys	Val	Ala	Asn	Ala	Glu	260	265	270
Ser	Leu	Asn	Ala	Ile	Gly	Val	Leu	Ile	Tyr	Met	Asp	Gln	Thr	Lys	Phe	275	280	285
Pro	Ile	Val	Asn	Ala	Glu	Leu	Ser	Phe	Phe	Gly	His	Ala	His	Leu	Gly	290	295	300
Thr	Gly	Asp	Pro	Tyr	Thr	Pro	Gly	Phe	Pro	Ser	Phe	Asn	His	Thr	Gln	305	310	315
Phe	Pro	Pro	Ser	Arg	Ser	Ser	Gly	Leu	Pro	Asn	Ile	Pro	Val	Gln	Thr	325	330	335
Ile	Ser	Arg	Ala	Ala	Ala	Glu	Lys	Leu	Phe	Gly	Asn	Met	Glu	Gly	Asp	340	345	350
Cys	Pro	Ser	Asp	Trp	Lys	Thr	Asp	Ser	Thr	Cys	Arg	Met	Val	Thr	Ser	355	360	365
Glu	Ser	Lys	Asn	Val	Lys	Leu	Thr	Val	Ser	Asn	Val	Leu	Lys	Glu	Ile	370	375	380
Lys	Ile	Leu	Asn	Ile	Phe	Gly	Val	Ile	Lys	Gly	Phe	Val	Glu	Pro	Asp	385	390	395
His	Tyr	Val	Val	Val	Gly	Ala	Gln	Arg	Asp	Ala	Trp	Gly	Pro	Gly	Ala	405	410	415
Ala	Lys	Ser	Gly	Val	Gly	Thr	Ala	Leu	Leu	Leu	Lys	Leu	Ala	Gln	Met	420	425	430
Phe	Ser	Asp	Met	Val	Leu	Lys	Asp	Gly	Phe	Gln	Pro	Ser	Arg	Ser	Ile	435	440	445
Ile	Phe	Ala	Ser	Trp	Ser	Ala	Gly	Asp	Phe	Gly	Ser	Val	Gly	Ala	Thr	450	455	460
Glu	Trp	Leu	Glu	Gly	Tyr	Leu	Ser	Ser	Leu	His	Leu	Lys	Ala	Phe	Thr	465	470	475
Tyr	Ile	Asn	Leu	Asp	Lys	Ala	Val	Leu	Gly	Thr	Ser	Asn	Phe	Lys	Val	485	490	495

Ser Ala Ser Pro Leu Leu Tyr Thr Leu Ile Glu Lys Thr Met Gln Asn
500 505 510

Val Lys His Pro Val Thr Gly Gln Phe Leu Tyr Gln Asp Ser Asn Trp
515 520 525

Ala Ser Lys Val Glu Lys Leu Thr Leu Asp Asn Ala Ala Phe Pro Phe
530 535 540

Leu Ala Tyr Ser Gly Ile Pro Ala Val Ser Phe Cys Phe Cys Glu Asp
545 550 555 560

Thr Asp Tyr Pro Tyr Leu Gly Thr Thr Met Asp Thr Tyr Lys Glu Leu
565 570 575

Ile Glu Arg Ile Pro Glu Leu Asn Lys Val Ala Arg Ala Ala Glu
580 585 590

Val Ala Gly Gln Phe Val Ile Lys Leu Thr His Asp Val Glu Leu Asn
595 600 605

Leu Asp Tyr Glu Arg Tyr Asn Ser Gln Leu Leu Ser Phe Val Arg Asp
610 615 620

Leu Asn Gln Tyr Arg Ala Asp Ile Lys Glu Met Gly Leu Ser Leu Gln
625 630 635 640

Trp Leu Tyr Ser Ala Arg Gly Asp Phe Phe Arg Ala Thr Ser Arg Leu
645 650 655

Thr Thr Asp Phe Gly Asn Ala Glu Lys Thr Asp Arg Phe Val Met Lys
660 665 670

Lys Leu Asn Asp Arg Val Met Arg Val Glu Tyr His Phe Leu Ser Pro
675 680 685

Tyr Val Ser Pro Lys Glu Ser Pro Phe Arg His Val Phe Trp Gly Ser
690 695 700

Gly Ser His Thr Leu Pro Ala Leu Leu Glu Asn Leu Lys Leu Arg Lys
705 710 715 720

Gln Asn Asn Gly Ala Phe Asn Glu Thr Leu Phe Arg Asn Gln Leu Ala
725 730 735

Leu Ala Thr Trp Thr Ile Gln Gly Ala Ala Asn Ala Leu Ser Gly Asp
740 745 750

Val Trp Asp Ile Asp Asn Glu Phe
755 760

<210> 7
<211> 63
<212> PRT
<213> Cavia Sp.

<400> 7

Lys Ile Thr Phe Ala Glu Lys Val Ala Asn Ala Glu Ser Leu Asn Ala
1 5 10 15

Leu Gly Val Leu Ile Tyr Leu Asp Trp Thr Lys Phe Pro Ile Pro Lys
20 25 30

Ala Asp Leu Pro Val Phe Gly His Val His Leu Gly Thr Gly Asp Pro
35 40 45

Tyr Thr Pro Gly Phe Pro Ser Phe Asn His Thr Gln Phe Pro Pro
50 55 60

<210> 8
<211> 760
<212> PRT
<213> Homo sapiens

<400> 8

Met Met Asp Gln Ala Arg Ser Ala Phe Ser Asn Leu Phe Gly Gly Glu
1 5 10 15

Pro Leu Ser Tyr Thr Arg Phe Ser Leu Ala Arg Gln Val Asp Gly Asp
20 25 30

Asn Ser His Val Glu Met Lys Leu Ala Val Asp Glu Glu Glu Asn Ala
35 40 45

Asp Asn Asn Thr Lys Ala Asn Val Thr Lys Pro Lys Arg Cys Ser Gly
50 55 60

Ser Ile Cys Tyr Gly Thr Ile Ala Val Ile Val Phe Phe Leu Ile Gly
65 70 75 80

Phe Met Ile Gly Tyr Leu Gly Tyr Cys Lys Gly Val Glu Pro Lys Thr
85 90 95

Glu Cys Glu Arg Leu Ala Gly Thr Glu Ser Pro Val Arg Glu Glu Pro
100 105 110

Gly Glu Asp Phe Pro Ala Ala Arg Arg Leu Tyr Trp Asp Asp Leu Lys
115 120 125

Arg Lys Leu Ser Glu Lys Leu Asp Ser Thr Asp Phe Thr Ser Thr Ile
130 135 140

Lys Leu Leu Asn Glu Asn Ser Tyr Val Pro Arg Glu Ala Gly Ser Gln
145 150 155 160

Lys Asp Glu Asn Leu Ala Leu Tyr Val Glu Asn Gln Phe Arg Glu Phe
165 170 175

Lys Leu Ser Lys Val Trp Arg Asp Gln His Phe Val Lys Ile Gln Val
180 185 190

Lys Asp Ser Ala Gln Asn Ser Val Ile Ile Val Asp Lys Asn Gly Arg
195 200 205

Leu Val Tyr Leu Val Glu Asn Pro Gly Gly Tyr Val Ala Tyr Ser Lys
210 215 220

Ala Ala Thr Val Thr Gly Lys Leu Val His Ala Asn Phe Gly Thr Lys
225 230 235 240

Lys Asp Phe Glu Asp Leu Tyr Thr Pro Val Asn Gly Ser Ile Val Ile
245 250 255

Val Arg Ala Gly Lys Ile Thr Phe Ala Glu Lys Val Ala Asn Ala Glu
260 265 270

Ser Leu Asn Ala Ile Gly Val Leu Ile Tyr Met Asp Gln Thr Lys Phe
275 280 285

Pro Ile Val Asn Ala Glu Leu Ser Phe Phe Gly His Ala His Leu Gly
290 295 300

Thr Gly Asp Pro Tyr Thr Pro Gly Phe Pro Ser Phe Asn His Thr Gln
305 310 315 320

Phe Pro Pro Ser Arg Ser Ser Gly Leu Pro Asn Ile Pro Val Gln Thr
325 330 335

Ile Ser Arg Ala Ala Ala Glu Lys Leu Phe Gly Asn Met Glu Gly Asp
340 345 350

Cys Pro Ser Asp Trp Lys Thr Asp Ser Thr Cys Arg Met Val Thr Ser
355 360 365

Glu Ser Lys Asn Val Lys Leu Thr Val Ser Asn Val Leu Lys Glu Ile
370 375 380

Lys Ile Leu Asn Ile Phe Gly Val Ile Lys Gly Phe Val Glu Pro Asp
385 390 395 400

His Tyr Val Val Val Gly Ala Gln Arg Asp Ala Trp Gly Pro Gly Ala
405 410 415

Ala Lys Ser Gly Val Gly Thr Ala Leu Leu Leu Lys Leu Ala Gln Met
420 425 430

Phe Ser Asp Met Val Leu Lys Asp Gly Phe Gln Pro Ser Arg Ser Ile
435 440 445

Ile Phe Ala Ser Trp Ser Ala Gly Asp Phe Gly Ser Val Gly Ala Thr
450 455 460

Glu Trp Leu Glu Gly Tyr Leu Ser Ser Leu His Leu Lys Ala Phe Thr
465 470 475 480

Tyr Ile Asn Leu Asp Lys Ala Val Leu Gly Thr Ser Asn Phe Lys Val
485 490 495

Ser Ala Ser Pro Leu Leu Tyr Thr Leu Ile Glu Lys Thr Met Gln Asn
500 505 510

Val Lys His Pro Val Thr Gly Gln Phe Leu Tyr Gln Asp Ser Asn Trp
515 520 525

Ala Ser Lys Val Glu Lys Leu Thr Leu Asp Asn Ala Ala Phe Pro Phe
530 535 540

Leu Ala Tyr Ser Gly Ile Pro Ala Val Ser Phe Cys Phe Cys Glu Asp
545 550 555 560

Thr Asp Tyr Pro Tyr Leu Gly Thr Thr Met Asp Thr Tyr Lys Glu Leu
565 570 575

Ile Glu Arg Ile Pro Glu Leu Asn Lys Val Ala Arg Ala Ala Glu

580					585					590					
Val	Ala	Gly	Gln	Phe	Val	Ile	Lys	Leu	Thr	His	Asp	Val	Glu	Leu	Asn
		595					600					605			
Leu	Asp	Tyr	Glu	Arg	Tyr	Asn	Ser	Gln	Leu	Leu	Ser	Phe	Val	Arg	Asp
	610					615					620				
Leu	Asn	Gln	Tyr	Arg	Ala	Asp	Ile	Lys	Glu	Met	Gly	Leu	Ser	Leu	Gln
625						630					635				640
Trp	Leu	Tyr	Ser	Ala	Arg	Gly	Asp	Phe	Phe	Arg	Ala	Thr	Ser	Arg	Leu
				645					650					655	
Thr	Thr	Asp	Phe	Gly	Asn	Ala	Glu	Lys	Thr	Asp	Arg	Phe	Val	Met	Lys
			660					665					670		
Lys	Leu	Asn	Asp	Arg	Val	Met	Arg	Val	Glu	Tyr	His	Phe	Leu	Ser	Pro
		675					680					685			
Tyr	Val	Ser	Pro	Lys	Glu	Ser	Pro	Phe	Arg	His	Val	Phe	Trp	Gly	Ser
	690					695					700				
Gly	Ser	His	Thr	Leu	Pro	Ala	Leu	Leu	Glu	Asn	Leu	Lys	Leu	Arg	Lys
705						710					715				720
Gln	Asn	Asn	Gly	Ala	Phe	Asn	Glu	Thr	Leu	Phe	Arg	Asn	Gln	Leu	Ala
				725					730					735	
Leu	Ala	Thr	Trp	Thr	Ile	Gln	Gly	Ala	Ala	Asn	Ala	Leu	Ser	Gly	Asp
			740					745					750		
Val	Trp	Asp	Ile	Asp	Asn	Glu	Phe								
		755					760								
<210> 9 <211> 760 <212> PRT <213> Homo sapiens <400> 9															
Met	Met	Asp	Gln	Ala	Arg	Ser	Ala	Phe	Ser	Asn	Leu	Phe	Gly	Gly	Glu
1				5					10					15	
Pro	Leu	Ser	Tyr	Thr	Arg	Phe	Ser	Leu	Ala	Arg	Gln	Val	Asp	Gly	Asp
			20					25					30		

Asn Ser His Val Glu Met Lys Leu Ala Val Asp Glu Glu Glu Asn Ala
35 40 45

Asp Asn Asn Thr Lys Ala Asn Val Thr Lys Pro Lys Arg Cys Ser Gly
50 55 60

Ser Ile Cys Tyr Gly Thr Ile Ala Val Ile Val Phe Phe Leu Ile Gly
65 70 75 80

Phe Met Ile Gly Tyr Leu Gly Tyr Cys Lys Gly Val Glu Pro Lys Thr
85 90 95

Glu Cys Glu Arg Leu Ala Gly Thr Glu Ser Pro Val Arg Glu Glu Pro
100 105 110

Gly Glu Asp Phe Pro Ala Ala Arg Arg Leu Tyr Trp Asp Asp Leu Lys
115 120 125

Arg Lys Leu Ser Glu Lys Leu Asp Ser Thr Asp Phe Thr Ser Thr Ile
130 135 140

Lys Leu Leu Asn Glu Asn Ser Tyr Val Pro Arg Glu Ala Gly Ser Gln
145 150 155 160

Lys Asp Glu Asn Leu Ala Leu Tyr Val Glu Asn Gln Phe Arg Glu Phe
165 170 175

Lys Leu Ser Lys Val Trp Arg Asp Gln His Phe Val Lys Ile Gln Val
180 185 190

Lys Asp Ser Ala Gln Asn Ser Val Ile Ile Val Asp Lys Asn Gly Arg
195 200 205

Leu Val Tyr Leu Val Glu Asn Pro Gly Gly Tyr Val Ala Tyr Ser Lys
210 215 220

Ala Ala Thr Val Thr Gly Lys Leu Val His Ala Asn Phe Gly Thr Lys
225 230 235 240

Lys Asp Phe Glu Asp Leu Tyr Thr Pro Val Asn Gly Ser Ile Val Ile
245 250 255

Val Arg Ala Gly Lys Ile Thr Phe Ala Glu Lys Val Ala Asn Ala Glu
260 265 270

Ser Leu Asn Ala Ile Gly Val Leu Ile Tyr Met Asp Gln Thr Lys Phe
275 280 285

Pro Ile Val Asn Ala Glu Leu Ser Phe Phe Gly His Ala His Leu Gly
290 295 300

Thr Gly Asp Pro Tyr Thr Pro Gly Phe Pro Ser Phe Asn His Thr Gln
305 310 315 320

Phe Pro Pro Ser Arg Ser Ser Gly Leu Pro Asn Ile Pro Val Gln Thr
325 330 335

Ile Ser Arg Ala Ala Ala Glu Lys Leu Phe Gly Asn Met Glu Gly Asp
340 345 350

Cys Pro Ser Asp Trp Lys Thr Asp Ser Thr Cys Arg Met Val Thr Ser
355 360 365

Glu Ser Lys Asn Val Lys Leu Thr Val Ser Asn Val Leu Lys Glu Ile
370 375 380

Lys Ile Leu Asn Ile Phe Gly Val Ile Lys Gly Phe Val Glu Pro Asp
385 390 395 400

His Tyr Val Val Val Gly Ala Gln Arg Asp Ala Trp Gly Pro Gly Ala
405 410 415

Ala Lys Ser Gly Val Gly Thr Ala Leu Leu Leu Lys Leu Ala Gln Met
420 425 430

Phe Ser Asp Met Val Leu Lys Asp Gly Phe Gln Pro Ser Arg Ser Ile
435 440 445

Ile Phe Ala Ser Trp Ser Ala Gly Asp Phe Gly Ser Val Gly Ala Thr
450 455 460

Glu Trp Leu Glu Gly Tyr Leu Ser Ser Leu His Leu Lys Ala Phe Thr
465 470 475 480

Tyr Ile Asn Leu Asp Lys Ala Val Leu Gly Thr Ser Asn Phe Lys Val
485 490 495

Ser Ala Ser Pro Leu Leu Tyr Thr Leu Ile Glu Lys Thr Met Gln Asn
500 505 510

Val Lys His Pro Val Thr Gly Gln Phe Leu Tyr Gln Asp Ser Asn Trp

515		520		525
Ala Ser Lys Val Glu Lys Leu Thr Leu Asp Asn Ala Ala Phe Pro Phe				
530		535		540
Leu Ala Tyr Ser Gly Ile Pro Ala Val Ser Phe Cys Phe Cys Glu Asp				
545		550		555
Thr Asp Tyr Pro Tyr Leu Gly Thr Thr Met Asp Thr Tyr Lys Glu Leu				
		565		570
				575
Ile Glu Arg Ile Pro Glu Leu Asn Lys Val Ala Arg Ala Ala Ala Glu				
		580		585
				590
Val Ala Gly Gln Phe Val Ile Lys Leu Thr His Asp Val Glu Leu Asn				
		595		600
				605
Leu Asp Tyr Glu Arg Tyr Asn Ser Gln Leu Leu Ser Phe Val Arg Asp				
610		615		620
Leu Asn Gln Tyr Arg Ala Asp Ile Lys Glu Met Gly Leu Ser Leu Gln				
625		630		635
				640
Trp Leu Tyr Ser Ala Arg Gly Asp Phe Phe Arg Ala Thr Ser Arg Leu				
		645		650
				655
Thr Thr Asp Phe Gly Asn Ala Glu Lys Thr Asp Arg Phe Val Met Lys				
		660		665
				670
Lys Leu Asn Asp Arg Val Met Arg Val Glu Tyr His Phe Leu Ser Pro				
675		680		685
Tyr Val Ser Pro Lys Glu Ser Pro Phe Arg His Val Phe Trp Gly Ser				
690		695		700
Gly Ser His Thr Leu Pro Ala Leu Leu Glu Asn Leu Lys Leu Arg Lys				
705		710		715
				720
Gln Asn Asn Gly Ala Phe Asn Glu Thr Leu Phe Arg Asn Gln Leu Ala				
		725		730
				735
Leu Ala Thr Trp Thr Ile Gln Gly Ala Ala Asn Ala Leu Ser Gly Asp				
		740		745
				750
Val Trp Asp Ile Asp Asn Glu Phe				
755		760		

<210> 10
<211> 760
<212> PRT
<213> Homo sapiens

<400> 10

Met Met Asp Gln Ala Arg Ser Ala Phe Ser Asn Leu Phe Gly Gly Glu
1 5 10 15

Pro Leu Ser Tyr Thr Arg Phe Ser Leu Ala Arg Gln Val Asp Gly Asp
20 25 30

Asn Ser His Val Glu Met Lys Leu Ala Val Asp Glu Glu Glu Asn Ala
35 40 45

Asp Asn Asn Thr Lys Ala Asn Val Thr Lys Pro Lys Arg Cys Ser Gly
50 55 60

Ser Ile Cys Tyr Gly Thr Ile Ala Val Ile Val Phe Phe Leu Ile Gly
65 70 75 80

Phe Met Ile Gly Tyr Leu Gly Tyr Cys Lys Gly Val Glu Pro Lys Thr
85 90 95

Glu Cys Glu Arg Leu Ala Gly Thr Glu Ser Pro Val Arg Glu Glu Pro
100 105 110

Gly Glu Asp Phe Pro Ala Ala Arg Arg Leu Tyr Trp Asp Asp Leu Lys
115 120 125

Arg Lys Leu Ser Glu Lys Leu Asp Ser Thr Asp Phe Thr Ser Thr Ile
130 135 140

Lys Leu Leu Asn Glu Asn Ser Tyr Val Pro Arg Glu Ala Gly Ser Gln
145 150 155 160

Lys Asp Glu Asn Leu Ala Leu Tyr Val Glu Asn Gln Phe Arg Glu Phe
165 170 175

Lys Leu Ser Lys Val Trp Arg Asp Gln His Phe Val Lys Ile Gln Val
180 185 190

Lys Asp Ser Ala Gln Asn Ser Val Ile Ile Val Asp Lys Asn Gly Arg
195 200 205

Leu Val Tyr Leu Val Glu Asn Pro Gly Gly Tyr Val Ala Tyr Ser Lys
210 215 220

Ala Ala Thr Val Thr Gly Lys Leu Val His Ala Asn Phe Gly Thr Lys
225 230 235 240

Lys Asp Phe Glu Asp Leu Tyr Thr Pro Val Asn Gly Ser Ile Val Ile
245 250 255

Val Arg Ala Gly Lys Ile Thr Phe Ala Glu Lys Val Ala Asn Ala Glu
260 265 270

Ser Leu Asn Ala Ile Gly Val Leu Ile Tyr Met Asp Gln Thr Lys Phe
275 280 285

Pro Ile Val Asn Ala Glu Leu Ser Phe Phe Gly His Ala His Leu Gly
290 295 300

Thr Gly Asp Pro Tyr Thr Pro Gly Phe Pro Ser Phe Asn His Thr Gln
305 310 315 320

Phe Pro Pro Ser Arg Ser Ser Gly Leu Pro Asn Ile Pro Val Gln Thr
325 330 335

Ile Ser Arg Ala Ala Ala Glu Lys Leu Phe Gly Asn Met Glu Gly Asp
340 345 350

Cys Pro Ser Asp Trp Lys Thr Asp Ser Thr Cys Arg Met Val Thr Ser
355 360 365

Glu Ser Lys Asn Val Lys Leu Thr Val Ser Asn Val Leu Lys Glu Ile
370 375 380

Lys Ile Leu Asn Ile Phe Gly Val Ile Lys Gly Phe Val Glu Pro Asp
385 390 395 400

His Tyr Val Val Val Gly Ala Gln Arg Asp Ala Trp Gly Pro Gly Ala
405 410 415

Ala Lys Ser Gly Val Gly Thr Ala Leu Leu Leu Lys Leu Ala Gln Met
420 425 430

Phe Ser Asp Met Val Leu Lys Asp Gly Phe Gln Pro Ser Arg Ser Ile
435 440 445

Ile Phe Ala Ser Trp Ser Ala Gly Asp Phe Gly Ser Val Gly Ala Thr

450						455						460					
Glu	Trp	Leu	Glu	Gly	Tyr	Leu	Ser	Ser	Leu	His	Leu	Lys	Ala	Phe	Thr		
465					470					475					480		
Tyr	Ile	Asn	Leu	Asp	Lys	Ala	Val	Leu	Gly	Thr	Ser	Asn	Phe	Lys	Val		
				485					490					495			
Ser	Ala	Ser	Pro	Leu	Leu	Tyr	Thr	Leu	Ile	Glu	Lys	Thr	Met	Gln	Asn		
			500					505					510				
Val	Lys	His	Pro	Val	Thr	Gly	Gln	Phe	Leu	Tyr	Gln	Asp	Ser	Asn	Trp		
		515					520					525					
Ala	Ser	Lys	Val	Glu	Lys	Leu	Thr	Leu	Asp	Asn	Ala	Ala	Phe	Pro	Phe		
	530					535					540						
Leu	Ala	Tyr	Ser	Gly	Ile	Pro	Ala	Val	Ser	Phe	Cys	Phe	Cys	Glu	Asp		
545					550					555					560		
Thr	Asp	Tyr	Pro	Tyr	Leu	Gly	Thr	Thr	Met	Asp	Thr	Tyr	Lys	Glu	Leu		
				565					570					575			
Ile	Glu	Arg	Ile	Pro	Glu	Leu	Asn	Lys	Val	Ala	Arg	Ala	Ala	Ala	Glu		
			580					585					590				
Val	Ala	Gly	Gln	Phe	Val	Ile	Lys	Leu	Thr	His	Asp	Val	Glu	Leu	Asn		
		595					600					605					
Leu	Asp	Tyr	Glu	Arg	Tyr	Asn	Ser	Gln	Leu	Leu	Ser	Phe	Val	Arg	Asp		
	610					615						620					
Leu	Asn	Gln	Tyr	Arg	Ala	Asp	Ile	Lys	Glu	Met	Gly	Leu	Ser	Leu	Gln		
625					630					635					640		
Trp	Leu	Tyr	Ser	Ala	Arg	Gly	Asp	Phe	Phe	Arg	Ala	Thr	Ser	Arg	Leu		
				645					650					655			
Thr	Thr	Asp	Phe	Gly	Asn	Ala	Glu	Lys	Thr	Asp	Arg	Phe	Val	Met	Lys		
			660					665					670				
Lys	Leu	Asn	Asp	Arg	Val	Met	Arg	Val	Glu	Tyr	His	Phe	Leu	Ser	Pro		
		675					680					685					
Tyr	Val	Ser	Pro	Lys	Glu	Ser	Pro	Phe	Arg	His	Val	Phe	Trp	Gly	Ser		
	690					695					700						

Gly Ser His Thr Leu Pro Ala Leu Leu Glu Asn Leu Lys Leu Arg Lys
705 710 715 720

Gln Asn Asn Gly Ala Phe Asn Glu Thr Leu Phe Arg Asn Gln Leu Ala
725 730 735

Leu Ala Thr Trp Thr Ile Gln Gly Ala Ala Asn Ala Leu Ser Gly Asp
740 745 750

Val Trp Asp Ile Asp Asn Glu Phe
755 760

<210> 11
<211> 640
<212> PRT
<213> Homo sapiens

<400> 11

Arg Leu Tyr Trp Asp Asp Leu Lys Arg Lys Leu Ser Glu Lys Leu Asp
1 5 10 15

Ser Thr Asp Phe Thr Ser Thr Ile Lys Leu Leu Asn Glu Asn Ser Tyr
20 25 30

Val Pro Arg Glu Ala Gly Ser Gln Lys Asp Glu Asn Leu Ala Leu Tyr
35 40 45

Val Glu Asn Gln Phe Arg Glu Phe Lys Leu Ser Lys Val Trp Arg Asp
50 55 60

Gln His Phe Val Lys Ile Gln Val Lys Asp Ser Ala Gln Asn Ser Val
65 70 75 80

Ile Ile Val Asp Lys Asn Gly Arg Leu Val Tyr Leu Val Glu Asn Pro
85 90 95

Gly Gly Tyr Val Ala Tyr Ser Lys Ala Ala Thr Val Thr Gly Lys Leu
100 105 110

Val His Ala Asn Phe Gly Thr Lys Lys Asp Phe Glu Asp Leu Tyr Thr
115 120 125

Pro Val Asn Gly Ser Ile Val Ile Val Arg Ala Gly Lys Ile Thr Phe
130 135 140

Ala Glu Lys Val Ala Asn Ala Glu Ser Leu Asn Ala Ile Gly Val Leu
145 150 155 160

Ile Tyr Met Asp Gln Thr Lys Phe Pro Ile Val Asn Ala Glu Leu Ser
165 170 175

Phe Phe Gly His Ala His Leu Gly Thr Gly Asp Pro Tyr Thr Pro Gly
180 185 190

Phe Pro Ser Phe Asn His Thr Gln Phe Pro Pro Ser Arg Ser Ser Gly
195 200 205

Leu Pro Asn Ile Pro Val Gln Thr Ile Ser Arg Ala Ala Ala Glu Lys
210 215 220

Leu Phe Gly Asn Met Glu Gly Asp Cys Pro Ser Asp Trp Lys Thr Asp
225 230 235 240

Ser Thr Cys Arg Met Val Thr Ser Glu Ser Lys Asn Val Lys Leu Thr
245 250 255

Val Ser Asn Val Leu Lys Glu Ile Lys Ile Leu Asn Ile Phe Gly Val
260 265 270

Ile Lys Gly Phe Val Glu Pro Asp His Tyr Val Val Val Gly Ala Gln
275 280 285

Arg Asp Ala Trp Gly Pro Gly Ala Ala Lys Ser Gly Val Gly Thr Ala
290 295 300

Leu Leu Leu Lys Leu Ala Gln Met Phe Ser Asp Met Val Leu Lys Asp
305 310 315 320

Gly Phe Gln Pro Ser Arg Ser Ile Ile Phe Ala Ser Trp Ser Ala Gly
325 330 335

Asp Phe Gly Ser Val Gly Ala Thr Glu Trp Leu Glu Gly Tyr Leu Ser
340 345 350

Ser Leu His Leu Lys Ala Phe Thr Tyr Ile Asn Leu Asp Lys Ala Val
355 360 365

Leu Gly Thr Ser Asn Phe Lys Val Ser Ala Ser Pro Leu Leu Tyr Thr
370 375 380

Leu Ile Glu Lys Thr Met Gln Asn Val Lys His Pro Val Thr Gly Gln

385					390					395				400	
Phe	Leu	Tyr	Gln	Asp	Ser	Asn	Trp	Ala	Ser	Lys	Val	Glu	Lys	Leu	Thr
				405					410					415	
Leu	Asp	Asn	Ala	Ala	Phe	Pro	Phe	Leu	Ala	Tyr	Ser	Gly	Ile	Pro	Ala
			420					425					430		
Val	Ser	Phe	Cys	Phe	Cys	Glu	Asp	Thr	Asp	Tyr	Pro	Tyr	Leu	Gly	Thr
		435					440					445			
Thr	Met	Asp	Thr	Tyr	Lys	Glu	Leu	Ile	Glu	Arg	Ile	Pro	Glu	Leu	Asn
	450					455					460				
Lys	Val	Ala	Arg	Ala	Ala	Ala	Glu	Val	Ala	Gly	Gln	Phe	Val	Ile	Lys
465					470					475					480
Leu	Thr	His	Asp	Val	Glu	Leu	Asn	Leu	Asp	Tyr	Glu	Arg	Tyr	Asn	Ser
			485						490					495	
Gln	Leu	Leu	Ser	Phe	Val	Arg	Asp	Leu	Asn	Gln	Tyr	Arg	Ala	Asp	Ile
			500					505					510		
Lys	Glu	Met	Gly	Leu	Ser	Leu	Gln	Trp	Leu	Tyr	Ser	Ala	Arg	Gly	Asp
		515					520					525			
Phe	Phe	Arg	Ala	Thr	Ser	Arg	Leu	Thr	Thr	Asp	Phe	Gly	Asn	Ala	Glu
	530					535					540				
Lys	Thr	Asp	Arg	Phe	Val	Met	Lys	Lys	Leu	Asn	Asp	Arg	Val	Met	Arg
545					550					555					560
Val	Glu	Tyr	His	Phe	Leu	Ser	Pro	Tyr	Val	Ser	Pro	Lys	Glu	Ser	Pro
				565					570					575	
Phe	Arg	His	Val	Phe	Trp	Gly	Ser	Gly	Ser	His	Thr	Leu	Pro	Ala	Leu
			580					585					590		
Leu	Glu	Asn	Leu	Lys	Leu	Arg	Lys	Gln	Asn	Asn	Gly	Ala	Phe	Asn	Glu
		595					600					605			
Thr	Leu	Phe	Arg	Asn	Gln	Leu	Ala	Leu	Ala	Thr	Trp	Thr	Ile	Gln	Gly
	610					615					620				
Ala	Ala	Asn	Ala	Leu	Ser	Gly	Asp	Val	Trp	Asp	Ile	Asp	Asn	Glu	Phe
625					630					635					640

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<211> 640
<212> PRT
<213> Homo sapiens

<400> 12

Arg Leu Tyr Trp Asp Asp Leu Lys Arg Lys Leu Ser Glu Lys Leu Asp
1 5 10 15

Ser Thr Asp Phe Thr Ser Thr Ile Lys Leu Leu Asn Glu Asn Ser Tyr
20 25 30

Val Pro Arg Glu Ala Gly Ser Gln Lys Asp Glu Asn Leu Ala Leu Tyr
35 40 45

Val Glu Asn Gln Phe Arg Glu Phe Lys Leu Ser Lys Val Trp Arg Asp
50 55 60

Gln His Phe Val Lys Ile Gln Val Lys Asp Ser Ala Gln Asn Ser Val
65 70 75 80

Ile Ile Val Asp Lys Asn Gly Arg Leu Val Tyr Leu Val Glu Asn Pro
85 90 95

Gly Gly Tyr Val Ala Tyr Ser Lys Ala Ala Thr Val Thr Gly Lys Leu
100 105 110

Val His Ala Asn Phe Gly Thr Lys Lys Asp Phe Glu Asp Leu Tyr Thr
115 120 125

Pro Val Asn Gly Ser Ile Val Ile Val Arg Ala Gly Lys Ile Thr Phe
130 135 140

Ala Glu Lys Val Ala Asn Ala Glu Ser Leu Asn Ala Ile Gly Val Leu
145 150 155 160

Ile Tyr Met Asp Gln Thr Lys Phe Pro Ile Val Asn Ala Glu Leu Ser
165 170 175

Phe Phe Gly His Ala His Leu Gly Thr Gly Asp Pro Tyr Thr Pro Gly
180 185 190

Phe Pro Ser Phe Asn His Thr Gln Phe Pro Pro Ser Arg Ser Ser Gly
195 200 205

Leu Pro Asn Ile Pro Val Gln Thr Ile Ser Arg Ala Ala Ala Glu Lys
210 215 220

Leu Phe Gly Asn Met Glu Gly Asp Cys Pro Ser Asp Trp Lys Thr Asp
225 230 235 240

Ser Thr Cys Arg Met Val Thr Ser Glu Ser Lys Asn Val Lys Leu Thr
245 250 255

Val Ser Asn Val Leu Lys Glu Ile Lys Ile Leu Asn Ile Phe Gly Val
260 265 270

Ile Lys Gly Phe Val Glu Pro Asp His Tyr Val Val Val Gly Ala Gln
275 280 285

Arg Asp Ala Trp Gly Pro Gly Ala Ala Lys Ser Gly Val Gly Thr Ala
290 295 300

Leu Leu Leu Lys Leu Ala Gln Met Phe Ser Asp Met Val Leu Lys Asp
305 310 315 320

Gly Phe Gln Pro Ser Arg Ser Ile Ile Phe Ala Ser Trp Ser Ala Gly
325 330 335

Asp Phe Gly Ser Val Gly Ala Thr Glu Trp Leu Glu Gly Tyr Leu Ser
340 345 350

Ser Leu His Leu Lys Ala Phe Thr Tyr Ile Asn Leu Asp Lys Ala Val
355 360 365

Leu Gly Thr Ser Asn Phe Lys Val Ser Ala Ser Pro Leu Leu Tyr Thr
370 375 380

Leu Ile Glu Lys Thr Met Gln Asn Val Lys His Pro Val Thr Gly Gln
385 390 395 400

Phe Leu Tyr Gln Asp Ser Asn Trp Ala Ser Lys Val Glu Lys Leu Thr
405 410 415

Leu Asp Asn Ala Ala Phe Pro Phe Leu Ala Tyr Ser Gly Ile Pro Ala
420 425 430

Val Ser Phe Cys Phe Cys Glu Asp Thr Asp Tyr Pro Tyr Leu Gly Thr
435 440 445

Thr Met Asp Thr Tyr Lys Glu Leu Ile Glu Arg Ile Pro Glu Leu Asn

450	455	460
Lys Val Ala Arg Ala Ala Ala Glu Val Ala Gly Gln Phe Val Ile Lys 465 470 475 480		
Leu Thr His Asp Val Glu Leu Asn Leu Asp Tyr Glu Arg Tyr Asn Ser 485 490 495		
Gln Leu Leu Ser Phe Val Arg Asp Leu Asn Gln Tyr Arg Ala Asp Ile 500 505 510		
Lys Glu Met Gly Leu Ser Leu Gln Trp Leu Tyr Ser Ala Arg Gly Asp 515 520 525		
Phe Phe Arg Ala Thr Ser Arg Leu Thr Thr Asp Phe Gly Asn Ala Glu 530 535 540		
Lys Thr Asp Arg Phe Val Met Lys Lys Leu Asn Asp Arg Val Met Arg 545 550 555 560		
Val Glu Tyr His Phe Leu Ser Pro Tyr Val Ser Pro Lys Glu Ser Pro 565 570 575		
Phe Arg His Val Phe Trp Gly Ser Gly Ser His Thr Leu Pro Ala Leu 580 585 590		
Leu Glu Asn Leu Lys Leu Arg Lys Gln Asn Asn Gly Ala Phe Asn Glu 595 600 605		
Thr Leu Phe Arg Asn Gln Leu Ala Leu Ala Thr Trp Thr Ile Gln Gly 610 615 620		
Ala Ala Asn Ala Leu Ser Gly Asp Val Trp Asp Ile Asp Asn Glu Phe 625 630 635 640		
<210> 13		
<211> 640		
<212> PRT		
<213> Homo sapiens		
<400> 13		
Arg Leu Tyr Trp Asp Asp Leu Lys Arg Lys Leu Ser Glu Lys Leu Asp 1 5 10 15		
Ser Thr Asp Phe Thr Ser Thr Ile Lys Leu Leu Asn Glu Asn Ser Tyr 20 25 30		

Val Pro Arg Glu Ala Gly Ser Gln Lys Asp Glu Asn Leu Ala Leu Tyr
35 40 45

Val Glu Asn Gln Phe Arg Glu Phe Lys Leu Ser Lys Val Trp Arg Asp
50 55 60

Gln His Phe Val Lys Ile Gln Val Lys Asp Ser Ala Gln Asn Ser Val
65 70 75 80

Ile Ile Val Asp Lys Asn Gly Arg Leu Val Tyr Leu Val Glu Asn Pro
85 90 95

Gly Gly Tyr Val Ala Tyr Ser Lys Ala Ala Thr Val Thr Gly Lys Leu
100 105 110

Val His Ala Asn Phe Gly Thr Lys Lys Asp Phe Glu Asp Leu Tyr Thr
115 120 125

Pro Val Asn Gly Ser Ile Val Ile Val Arg Ala Gly Lys Ile Thr Phe
130 135 140

Ala Glu Lys Val Ala Asn Ala Glu Ser Leu Asn Ala Ile Gly Val Leu
145 150 155 160

Ile Tyr Met Asp Gln Thr Lys Phe Pro Ile Val Asn Ala Glu Leu Ser
165 170 175

Phe Phe Gly His Ala His Leu Gly Thr Gly Asp Pro Tyr Thr Pro Gly
180 185 190

Phe Pro Ser Phe Asn His Thr Gln Phe Pro Pro Ser Arg Ser Ser Gly
195 200 205

Leu Pro Asn Ile Pro Val Gln Thr Ile Ser Arg Ala Ala Ala Glu Lys
210 215 220

Leu Phe Gly Asn Met Glu Gly Asp Cys Pro Ser Asp Trp Lys Thr Asp
225 230 235 240

Ser Thr Cys Arg Met Val Thr Ser Glu Ser Lys Asn Val Lys Leu Thr
245 250 255

Val Ser Asn Val Leu Lys Glu Ile Lys Ile Leu Asn Ile Phe Gly Val
260 265 270

Ile Lys Gly Phe Val Glu Pro Asp His Tyr Val Val Val Gly Ala Gln
275 280 285

Arg Asp Ala Trp Gly Pro Gly Ala Ala Lys Ser Gly Val Gly Thr Ala
290 295 300

Leu Leu Leu Lys Leu Ala Gln Met Phe Ser Asp Met Val Leu Lys Asp
305 310 315 320

Gly Phe Gln Pro Ser Arg Ser Ile Ile Phe Ala Ser Trp Ser Ala Gly
325 330 335

Asp Phe Gly Ser Val Gly Ala Thr Glu Trp Leu Glu Gly Tyr Leu Ser
340 345 350

Ser Leu His Leu Lys Ala Phe Thr Tyr Ile Asn Leu Asp Lys Ala Val
355 360 365

Leu Gly Thr Ser Asn Phe Lys Val Ser Ala Ser Pro Leu Leu Tyr Thr
370 375 380

Leu Ile Glu Lys Thr Met Gln Asn Val Lys His Pro Val Thr Gly Gln
385 390 395 400

Phe Leu Tyr Gln Asp Ser Asn Trp Ala Ser Lys Val Glu Lys Leu Thr
405 410 415

Leu Asp Asn Ala Ala Phe Pro Phe Leu Ala Tyr Ser Gly Ile Pro Ala
420 425 430

Val Ser Phe Cys Phe Cys Glu Asp Thr Asp Tyr Pro Tyr Leu Gly Thr
435 440 445

Thr Met Asp Thr Tyr Lys Glu Leu Ile Glu Arg Ile Pro Glu Leu Asn
450 455 460

Lys Val Ala Arg Ala Ala Ala Glu Val Ala Gly Gln Phe Val Ile Lys
465 470 475 480

Leu Thr His Asp Val Glu Leu Asn Leu Asp Tyr Glu Arg Tyr Asn Ser
485 490 495

Gln Leu Leu Ser Phe Val Arg Asp Leu Asn Gln Tyr Arg Ala Asp Ile
500 505 510

Lys Glu Met Gly Leu Ser Leu Gln Trp Leu Tyr Ser Ala Arg Gly Asp

515 520 525

Phe Phe Arg Ala Thr Ser Arg Leu Thr Thr Asp Phe Gly Asn Ala Glu
530 535 540

Lys Thr Asp Arg Phe Val Met Lys Lys Leu Asn Asp Arg Val Met Arg
545 550 555 560

Val Glu Tyr His Phe Leu Ser Pro Tyr Val Ser Pro Lys Glu Ser Pro
565 570 575

Phe Arg His Val Phe Trp Gly Ser Gly Ser His Thr Leu Pro Ala Leu
580 585 590

Leu Glu Asn Leu Lys Leu Arg Lys Gln Asn Asn Gly Ala Phe Asn Glu
595 600 605

Thr Leu Phe Arg Asn Gln Leu Ala Leu Ala Thr Trp Thr Ile Gln Gly
610 615 620

Ala Ala Asn Ala Leu Ser Gly Asp Val Trp Asp Ile Asp Asn Glu Phe
625 630 635 640

<210> 14
<211> 639
<212> PRT
<213> Homo sapiens

<400> 14

Leu Tyr Trp Asp Asp Leu Lys Arg Lys Leu Ser Glu Lys Leu Asp Ser
1 5 10 15

Thr Asp Phe Thr Ser Thr Ile Lys Leu Leu Asn Glu Asn Ser Tyr Val
20 25 30

Pro Arg Glu Ala Gly Ser Gln Lys Asp Glu Asn Leu Ala Leu Tyr Val
35 40 45

Glu Asn Glu Phe Arg Glu Phe Lys Leu Ser Lys Val Trp Arg Asp Gln
50 55 60

His Phe Val Lys Ile Gln Val Lys Asp Ser Ala Gln Asn Ser Val Ile
65 70 75 80

Ile Val Asp Lys Asn Gly Arg Leu Val Tyr Leu Val Glu Asn Pro Gly
85 90 95

Gly Tyr Val Ala Tyr Ser Lys Ala Ala Thr Val Thr Gly Lys Leu Val
100 105 110

His Ala Asn Phe Gly Thr Lys Lys Asp Phe Glu Asp Leu Tyr Thr Pro
115 120 125

Val Asn Gly Ser Ile Val Ile Val Arg Ala Gly Lys Ile Thr Phe Ala
130 135 140

Glu Lys Val Ala Asn Ala Glu Ser Leu Asn Ala Ile Gly Val Leu Ile
145 150 155 160

Tyr Met Asp Gln Thr Lys Phe Pro Ile Val Asn Ala Glu Leu Ser Phe
165 170 175

Phe Gly His Ala His Leu Gly Thr Gly Asp Pro Tyr Thr Pro Gly Phe
180 185 190

Pro Ser Phe Asn His Thr Gln Phe Pro Pro Ser Arg Ser Ser Gly Leu
195 200 205

Pro Asn Ile Pro Val Gln Thr Ile Ser Arg Ala Ala Ala Glu Lys Leu
210 215 220

Phe Gly Asn Met Glu Gly Asp Cys Pro Ser Asp Trp Lys Thr Asp Ser
225 230 235 240

Thr Cys Arg Met Val Thr Ser Glu Ser Lys Asn Val Lys Leu Thr Val
245 250 255

Ser Asn Val Leu Lys Glu Ile Lys Ile Leu Asn Ile Phe Gly Val Ile
260 265 270

Lys Gly Phe Val Glu Pro Asp His Tyr Val Val Val Gly Ala Gln Arg
275 280 285

Asp Ala Trp Gly Pro Gly Ala Ala Lys Ser Gly Val Gly Thr Ala Leu
290 295 300

Leu Leu Lys Leu Ala Gln Met Phe Ser Asp Met Val Leu Lys Asp Gly
305 310 315 320

Phe Gln Pro Ser Arg Ser Ile Ile Phe Ala Ser Trp Ser Ala Gly Asp
325 330 335

Phe Gly Ser Val Gly Ala Thr Glu Trp Leu Glu Gly Tyr Leu Ser Ser
340 345 350

Leu His Leu Lys Ala Phe Thr Tyr Ile Asn Leu Asp Lys Ala Val Leu
355 360 365

Gly Thr Ser Asn Phe Lys Val Ser Ala Ser Pro Leu Leu Tyr Thr Leu
370 375 380

Ile Glu Lys Thr Met Gln Asn Val Lys His Pro Val Thr Gly Gln Phe
385 390 395 400

Leu Tyr Gln Asp Ser Asn Trp Ala Ser Lys Val Glu Lys Leu Thr Leu
405 410 415

Asp Asn Ala Ala Phe Pro Phe Leu Ala Tyr Ser Gly Ile Pro Ala Val
420 425 430

Ser Phe Cys Phe Cys Glu Asp Thr Asp Tyr Pro Tyr Leu Gly Thr Thr
435 440 445

Met Asp Thr Tyr Lys Glu Leu Ile Glu Arg Ile Pro Glu Leu Asn Lys
450 455 460

Val Ala Arg Ala Ala Ala Glu Val Ala Gly Gln Phe Val Ile Lys Leu
465 470 475 480

Thr His Asp Val Glu Leu Asn Leu Asp Tyr Glu Glu Tyr Asn Ser Gln
485 490 495

Leu Leu Ser Phe Val Arg Asp Leu Asn Gln Tyr Arg Ala Asp Ile Lys
500 505 510

Glu Met Gly Leu Ser Leu Gln Trp Leu Tyr Ser Ala Arg Gly Asp Phe
515 520 525

Phe Arg Ala Thr Ser Arg Leu Thr Thr Asp Phe Gly Asn Ala Glu Lys
530 535 540

Thr Asp Arg Phe Val Met Lys Lys Leu Asn Asp Arg Val Met Arg Val
545 550 555 560

Glu Tyr His Phe Leu Ser Pro Tyr Val Ser Pro Lys Glu Ser Pro Phe
565 570 575

Arg His Val Phe Trp Gly Ser Gly Ser His Thr Leu Pro Ala Leu Leu

580	585	590
Glu Asn Leu Lys Leu Arg Lys Gln Asn Asn Gly Ala Phe Asn Glu Thr		
595	600	605
Leu Phe Arg Asn Gln Leu Ala Leu Ala Thr Trp Thr Ile Gln Gly Ala		
610	615	620
Ala Asn Ala Leu Ser Gly Asp Val Trp Asp Ile Asp Asn Glu Phe		
625	630	635
<210> 15		
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<212> PRT		
<213> Homo sapiens		
<400> 15		
Leu Tyr Trp Asp Asp Leu Lys Arg Lys Leu Ser Glu Lys Leu Asp Ser		
1	5	10
Thr Asp Phe Thr Ser Thr Ile Lys Leu Leu Asn Glu Asn Ser Tyr Val		
20	25	30
Pro Arg Glu Ala Gly Ser Gln Lys Asp Glu Asn Leu Ala Leu Tyr Val		
35	40	45
Glu Asn Glu Phe Arg Glu Phe Lys Leu Ser Lys Val Trp Arg Asp Gln		
50	55	60
His Phe Val Lys Ile Gln Val Lys Asp Ser Ala Gln Asn Ser Val Ile		
65	70	75
Ile Val Asp Lys Asn Gly Arg Leu Val Tyr Leu Val Glu Asn Pro Gly		
85	90	95
Gly Tyr Val Ala Tyr Ser Lys Ala Ala Thr Val Thr Gly Lys Leu Val		
100	105	110
His Ala Asn Phe Gly Thr Lys Lys Asp Phe Glu Asp Leu Tyr Thr Pro		
115	120	125
Val Asn Gly Ser Ile Val Ile Val Arg Ala Gly Lys Ile Thr Phe Ala		
130	135	140
Glu Lys Val Ala Asn Ala Glu Ser Leu Asn Ala Ile Gly Val Leu Ile		
145	150	155
		160

Tyr	Met	Asp	Gln	Thr	Lys	Phe	Pro	Ile	Val	Asn	Ala	Glu	Leu	Ser	Phe
			165						170					175	
Phe	Gly	His	Ala	His	Leu	Gly	Thr	Gly	Asp	Pro	Tyr	Thr	Pro	Gly	Phe
			180					185					190		
Pro	Ser	Phe	Asn	His	Thr	Gln	Phe	Pro	Pro	Ser	Arg	Ser	Ser	Gly	Leu
		195					200					205			
Pro	Asn	Ile	Pro	Val	Gln	Thr	Ile	Ser	Arg	Ala	Ala	Ala	Glu	Lys	Leu
	210					215					220				
Phe	Gly	Asn	Met	Glu	Gly	Asp	Cys	Pro	Ser	Asp	Trp	Lys	Thr	Asp	Ser
225					230					235					240
Thr	Cys	Arg	Met	Val	Thr	Ser	Glu	Ser	Lys	Asn	Val	Lys	Leu	Thr	Val
			245						250					255	
Ser	Asn	Val	Leu	Lys	Glu	Ile	Lys	Ile	Leu	Asn	Ile	Phe	Gly	Val	Ile
		260						265					270		
Lys	Gly	Phe	Val	Glu	Pro	Asp	His	Tyr	Val	Val	Val	Gly	Ala	Gln	Arg
		275					280					285			
Asp	Ala	Trp	Gly	Pro	Gly	Ala	Ala	Lys	Ser	Gly	Val	Gly	Thr	Ala	Leu
	290					295					300				
Leu	Leu	Lys	Leu	Ala	Gln	Met	Phe	Ser	Asp	Met	Val	Leu	Lys	Asp	Gly
305					310					315					320
Phe	Gln	Pro	Ser	Arg	Ser	Ile	Ile	Phe	Ala	Ser	Trp	Ser	Ala	Gly	Asp
			325						330					335	
Phe	Gly	Ser	Val	Gly	Ala	Thr	Glu	Trp	Leu	Glu	Gly	Tyr	Leu	Ser	Ser
			340					345					350		
Leu	His	Leu	Lys	Ala	Phe	Thr	Tyr	Ile	Asn	Leu	Asp	Lys	Ala	Val	Leu
		355					360					365			
Gly	Thr	Ser	Asn	Phe	Lys	Val	Ser	Ala	Ser	Pro	Leu	Leu	Tyr	Thr	Leu
	370					375					380				
Ile	Glu	Lys	Thr	Met	Gln	Asn	Val	Lys	His	Pro	Val	Thr	Gly	Gln	Phe
385					390					395					400

Leu Tyr Gln Asp Ser Asn Trp Ala Ser Lys Val Glu Lys Leu Thr Leu
405 410 415

Asp Asn Ala Ala Phe Pro Phe Leu Ala Tyr Ser Gly Ile Pro Ala Val
420 425 430

Ser Phe Cys Phe Cys Glu Asp Thr Asp Tyr Pro Tyr Leu Gly Thr Thr
435 440 445

Met Asp Thr Tyr Lys Glu Leu Ile Glu Arg Ile Pro Glu Leu Asn Lys
450 455 460

Val Ala Arg Ala Ala Ala Glu Val Ala Gly Gln Phe Val Ile Lys Leu
465 470 475 480

Thr His Asp Val Glu Leu Asn Leu Asp Tyr Glu Glu Tyr Asn Ser Gln
485 490 495

Leu Leu Ser Phe Val Arg Asp Leu Asn Gln Tyr Arg Ala Asp Ile Lys
500 505 510

Glu Met Gly Leu Ser Leu Gln Trp Leu Tyr Ser Ala Arg Gly Asp Phe
515 520 525

Phe Arg Ala Thr Ser Arg Leu Thr Thr Asp Phe Gly Asn Ala Glu Lys
530 535 540

Thr Asp Arg Phe Val Met Lys Lys Leu Asn Asp Arg Val Met Arg Val
545 550 555 560

Glu Tyr His Phe Leu Ser Pro Tyr Val Ser Pro Lys Glu Ser Pro Phe
565 570 575

Arg His Val Phe Trp Gly Ser Gly Ser His Thr Leu Pro Ala Leu Leu
580 585 590

Glu Asn Leu Lys Leu Arg Lys Gln Asn Asn Gly Ala Phe Asn Glu Thr
595 600 605

Leu Phe Arg Asn Gln Leu Ala Leu Ala Thr Trp Thr Ile Gln Gly Ala
610 615 620

Ala Asn Ala Leu Ser Gly Asp Val Trp Asp Ile Asp Asn Glu Phe
625 630 635

<211> 639
<212> PRT
<213> Homo sapiens

<400> 16

Leu Tyr Trp Asp Asp Leu Lys Arg Lys Leu Ser Glu Lys Leu Asp Ser
1 5 10 15

Thr Asp Phe Thr Ser Thr Ile Lys Leu Leu Asn Glu Asn Ser Tyr Val
20 25 30

Pro Arg Glu Ala Gly Ser Gln Lys Asp Glu Asn Leu Ala Leu Tyr Val
35 40 45

Glu Asn Glu Phe Arg Glu Phe Lys Leu Ser Lys Val Trp Arg Asp Gln
50 55 60

His Phe Val Lys Ile Gln Val Lys Asp Ser Ala Gln Asn Ser Val Ile
65 70 75 80

Ile Val Asp Lys Asn Gly Arg Leu Val Tyr Leu Val Glu Asn Pro Gly
85 90 95

Gly Tyr Val Ala Tyr Ser Lys Ala Ala Thr Val Thr Gly Lys Leu Val
100 105 110

His Ala Asn Phe Gly Thr Lys Lys Asp Phe Glu Asp Leu Tyr Thr Pro
115 120 125

Val Asn Gly Ser Ile Val Ile Val Arg Ala Gly Lys Ile Thr Phe Ala
130 135 140

Glu Lys Val Ala Asn Ala Glu Ser Leu Asn Ala Ile Gly Val Leu Ile
145 150 155 160

Tyr Met Asp Gln Thr Lys Phe Pro Ile Val Asn Ala Glu Leu Ser Phe
165 170 175

Phe Gly His Ala His Leu Gly Thr Gly Asp Pro Tyr Thr Pro Gly Phe
180 185 190

Pro Ser Phe Asn His Thr Gln Phe Pro Pro Ser Arg Ser Ser Gly Leu
195 200 205

Pro Asn Ile Pro Val Gln Thr Ile Ser Arg Ala Ala Ala Glu Lys Leu
210 215 220

Phe Gly Asn Met Glu Gly Asp Cys Pro Ser Asp Trp Lys Thr Asp Ser
225 230 235 240

Thr Cys Arg Met Val Thr Ser Glu Ser Lys Asn Val Lys Leu Thr Val
245 250 255

Ser Asn Val Leu Lys Glu Ile Lys Ile Leu Asn Ile Phe Gly Val Ile
260 265 270

Lys Gly Phe Val Glu Pro Asp His Tyr Val Val Val Gly Ala Gln Arg
275 280 285

Asp Ala Trp Gly Pro Gly Ala Ala Lys Ser Gly Val Gly Thr Ala Leu
290 295 300

Leu Leu Lys Leu Ala Gln Met Phe Ser Asp Met Val Leu Lys Asp Gly
305 310 315 320

Phe Gln Pro Ser Arg Ser Ile Ile Phe Ala Ser Trp Ser Ala Gly Asp
325 330 335

Phe Gly Ser Val Gly Ala Thr Glu Trp Leu Glu Gly Tyr Leu Ser Ser
340 345 350

Leu His Leu Lys Ala Phe Thr Tyr Ile Asn Leu Asp Lys Ala Val Leu
355 360 365

Gly Thr Ser Asn Phe Lys Val Ser Ala Ser Pro Leu Leu Tyr Thr Leu
370 375 380

Ile Glu Lys Thr Met Gln Asn Val Lys His Pro Val Thr Gly Gln Phe
385 390 395 400

Leu Tyr Gln Asp Ser Asn Trp Ala Ser Lys Val Glu Lys Leu Thr Leu
405 410 415

Asp Asn Ala Ala Phe Pro Phe Leu Ala Tyr Ser Gly Ile Pro Ala Val
420 425 430

Ser Phe Cys Phe Cys Glu Asp Thr Asp Tyr Pro Tyr Leu Gly Thr Thr
435 440 445

Met Asp Thr Tyr Lys Glu Leu Ile Glu Arg Ile Pro Glu Leu Asn Lys
450 455 460

Val Ala Arg Ala Ala Ala Glu Val Ala Gly Gln Phe Val Ile Lys Leu
465 470 475 480

Thr His Asp Val Glu Leu Asn Leu Asp Tyr Glu Glu Tyr Asn Ser Gln
485 490 495

Leu Leu Ser Phe Val Arg Asp Leu Asn Gln Tyr Arg Ala Asp Ile Lys
500 505 510

Glu Met Gly Leu Ser Leu Gln Trp Leu Tyr Ser Ala Arg Gly Asp Phe
515 520 525

Phe Arg Ala Thr Ser Arg Leu Thr Thr Asp Phe Gly Asn Ala Glu Lys
530 535 540

Thr Asp Arg Phe Val Met Lys Lys Leu Asn Asp Arg Val Met Arg Val
545 550 555 560

Glu Tyr His Phe Leu Ser Pro Tyr Val Ser Pro Lys Glu Ser Pro Phe
565 570 575

Arg His Val Phe Trp Gly Ser Gly Ser His Thr Leu Pro Ala Leu Leu
580 585 590

Glu Asn Leu Lys Leu Arg Lys Gln Asn Asn Gly Ala Phe Asn Glu Thr
595 600 605

Leu Phe Arg Asn Gln Leu Ala Leu Ala Thr Trp Thr Ile Gln Gly Ala
610 615 620

Ala Asn Ala Leu Ser Gly Asp Val Trp Asp Ile Asp Asn Glu Phe
625 630 635

<210> 17
<211> 639
<212> PRT
<213> Homo sapiens

<400> 17

Leu Tyr Trp Asp Asp Leu Lys Arg Lys Leu Ser Glu Lys Leu Asp Ser
1 5 10 15

Thr Asp Phe Thr Ser Thr Ile Lys Leu Leu Asn Glu Asn Ser Tyr Val
20 25 30

Pro Arg Glu Ala Gly Ser Gln Lys Asp Glu Asn Leu Ala Leu Tyr Val
35 40 45

Glu Asn Glu Phe Arg Glu Phe Lys Leu Ser Lys Val Trp Arg Asp Gln
50 55 60

His Phe Val Lys Ile Gln Val Lys Asp Ser Ala Gln Asn Ser Val Ile
65 70 75 80

Ile Val Asp Lys Asn Gly Arg Leu Val Tyr Leu Val Glu Asn Pro Gly
85 90 95

Gly Tyr Val Ala Tyr Ser Lys Ala Ala Thr Val Thr Gly Lys Leu Val
100 105 110

His Ala Asn Phe Gly Thr Lys Lys Asp Phe Glu Asp Leu Tyr Thr Pro
115 120 125

Val Asn Gly Ser Ile Val Ile Val Arg Ala Gly Lys Ile Thr Phe Ala
130 135 140

Glu Lys Val Ala Asn Ala Glu Ser Leu Asn Ala Ile Gly Val Leu Ile
145 150 155 160

Tyr Met Asp Gln Thr Lys Phe Pro Ile Val Asn Ala Glu Leu Ser Phe
165 170 175

Phe Gly His Ala His Leu Gly Thr Gly Asp Pro Tyr Thr Pro Gly Phe
180 185 190

Pro Ser Phe Asn His Thr Gln Phe Pro Pro Ser Arg Ser Ser Gly Leu
195 200 205

Pro Asn Ile Pro Val Gln Thr Ile Ser Arg Ala Ala Ala Glu Lys Leu
210 215 220

Phe Gly Asn Met Glu Gly Asp Cys Pro Ser Asp Trp Lys Thr Asp Ser
225 230 235 240

Thr Cys Arg Met Val Thr Ser Glu Ser Lys Asn Val Lys Leu Thr Val
245 250 255

Ser Asn Val Leu Lys Glu Ile Lys Ile Leu Asn Ile Phe Gly Val Ile
260 265 270

Lys Gly Phe Val Glu Pro Asp His Tyr Val Val Val Gly Ala Gln Arg
275 280 285

Asp Ala Trp Gly Pro Gly Ala Ala Lys Ser Gly Val Gly Thr Ala Leu
290 295 300

Leu Leu Lys Leu Ala Gln Met Phe Ser Asp Met Val Leu Lys Asp Gly
305 310 315 320

Phe Gln Pro Ser Arg Ser Ile Ile Phe Ala Ser Trp Ser Ala Gly Asp
325 330 335

Phe Gly Ser Val Gly Ala Thr Glu Trp Leu Glu Gly Tyr Leu Ser Ser
340 345 350

Leu His Leu Lys Ala Phe Thr Tyr Ile Asn Leu Asp Lys Ala Val Leu
355 360 365

Gly Thr Ser Asn Phe Lys Val Ser Ala Ser Pro Leu Leu Tyr Thr Leu
370 375 380

Ile Glu Lys Thr Met Gln Asn Val Lys His Pro Val Thr Gly Gln Phe
385 390 395 400

Leu Tyr Gln Asp Ser Asn Trp Ala Ser Lys Val Glu Lys Leu Thr Leu
405 410 415

Asp Asn Ala Ala Phe Pro Phe Leu Ala Tyr Ser Gly Ile Pro Ala Val
420 425 430

Ser Phe Cys Phe Cys Glu Asp Thr Asp Tyr Pro Tyr Leu Gly Thr Thr
435 440 445

Met Asp Thr Tyr Lys Glu Leu Ile Glu Arg Ile Pro Glu Leu Asn Lys
450 455 460

Val Ala Arg Ala Ala Ala Glu Val Ala Gly Gln Phe Val Ile Lys Leu
465 470 475 480

Thr His Asp Val Glu Leu Asn Leu Asp Tyr Glu Glu Tyr Asn Ser Gln
485 490 495

Leu Leu Ser Phe Val Arg Asp Leu Asn Gln Tyr Arg Ala Asp Ile Lys
500 505 510

Glu Met Gly Leu Ser Leu Gln Trp Leu Tyr Ser Ala Arg Gly Asp Phe
515 520 525

Phe Arg Ala Thr Ser Arg Leu Thr Thr Asp Phe Gly Asn Ala Glu Lys
530 535 540

Thr Asp Arg Phe Val Met Lys Lys Leu Asn Asp Arg Val Met Arg Val
545 550 555 560

Glu Tyr His Phe Leu Ser Pro Tyr Val Ser Pro Lys Glu Ser Pro Phe
565 570 575

Arg His Val Phe Trp Gly Ser Gly Ser His Thr Leu Pro Ala Leu Leu
580 585 590

Glu Asn Leu Lys Leu Arg Lys Gln Asn Asn Gly Ala Phe Asn Glu Thr
595 600 605

Leu Phe Arg Asn Gln Leu Ala Leu Ala Thr Trp Thr Ile Gln Gly Ala
610 615 620

Ala Asn Ala Leu Ser Gly Asp Val Trp Asp Ile Asp Asn Glu Phe
625 630 635

<210> 18
<211> 639
<212> PRT
<213> Homo sapiens

<400> 18

Leu Tyr Trp Asp Asp Leu Lys Arg Lys Leu Ser Glu Lys Leu Asp Ser
1 5 10 15

Thr Asp Phe Thr Ser Thr Ile Lys Leu Leu Asn Glu Asn Ser Tyr Val
20 25 30

Pro Arg Glu Ala Gly Ser Gln Lys Asp Glu Asn Leu Ala Leu Tyr Val
35 40 45

Glu Asn Glu Phe Arg Glu Phe Lys Leu Ser Lys Val Trp Arg Asp Gln
50 55 60

His Phe Val Lys Ile Gln Val Lys Asp Ser Ala Gln Asn Ser Val Ile
65 70 75 80

Ile Val Asp Lys Asn Gly Arg Leu Val Tyr Leu Val Glu Asn Pro Gly
85 90 95

Gly Tyr Val Ala Tyr Ser Lys Ala Ala Thr Val Thr Gly Lys Leu Val
100 105 110

His Ala Asn Phe Gly Thr Lys Lys Asp Phe Glu Asp Leu Tyr Thr Pro
115 120 125

Val Asn Gly Ser Ile Val Ile Val Arg Ala Gly Lys Ile Thr Phe Ala
130 135 140

Glu Lys Val Ala Asn Ala Glu Ser Leu Asn Ala Ile Gly Val Leu Ile
145 150 155 160

Tyr Met Asp Gln Thr Lys Phe Pro Ile Val Asn Ala Glu Leu Ser Phe
165 170 175

Phe Gly His Ala His Leu Gly Thr Gly Asp Pro Tyr Thr Pro Gly Phe
180 185 190

Pro Ser Phe Asn His Thr Gln Phe Pro Pro Ser Arg Ser Ser Gly Leu
195 200 205

Pro Asn Ile Pro Val Gln Thr Ile Ser Arg Ala Ala Ala Glu Lys Leu
210 215 220

Phe Gly Asn Met Glu Gly Asp Cys Pro Ser Asp Trp Lys Thr Asp Ser
225 230 235 240

Thr Cys Arg Met Val Thr Ser Glu Ser Lys Asn Val Lys Leu Thr Val
245 250 255

Ser Asn Val Leu Lys Glu Ile Lys Ile Leu Asn Ile Phe Gly Val Ile
260 265 270

Lys Gly Phe Val Glu Pro Asp His Tyr Val Val Val Gly Ala Gln Arg
275 280 285

Asp Ala Trp Gly Pro Gly Ala Ala Lys Ser Gly Val Gly Thr Ala Leu
290 295 300

Leu Leu Lys Leu Ala Gln Met Phe Ser Asp Met Val Leu Lys Asp Gly
305 310 315 320

Phe Gln Pro Ser Arg Ser Ile Ile Phe Ala Ser Trp Ser Ala Gly Asp
325 330 335

Phe Gly Ser Val Gly Ala Thr Glu Trp Leu Glu Gly Tyr Leu Ser Ser
340 345 350

Leu His Leu Lys Ala Phe Thr Tyr Ile Asn Leu Asp Lys Ala Val Leu
355 360 365

Gly Thr Ser Asn Phe Lys Val Ser Ala Ser Pro Leu Leu Tyr Thr Leu
370 375 380

Ile Glu Lys Thr Met Gln Asn Val Lys His Pro Val Thr Gly Gln Phe
385 390 395 400

Leu Tyr Gln Asp Ser Asn Trp Ala Ser Lys Val Glu Lys Leu Thr Leu
405 410 415

Asp Asn Ala Ala Phe Pro Phe Leu Ala Tyr Ser Gly Ile Pro Ala Val
420 425 430

Ser Phe Cys Phe Cys Glu Asp Thr Asp Tyr Pro Tyr Leu Gly Thr Thr
435 440 445

Met Asp Thr Tyr Lys Glu Leu Ile Glu Arg Ile Pro Glu Leu Asn Lys
450 455 460

Val Ala Arg Ala Ala Ala Glu Val Ala Gly Gln Phe Val Ile Lys Leu
465 470 475 480

Thr His Asp Val Glu Leu Asn Leu Asp Tyr Glu Glu Tyr Asn Ser Gln
485 490 495

Leu Leu Ser Phe Val Arg Asp Leu Asn Gln Tyr Arg Ala Asp Ile Lys
500 505 510

Glu Met Gly Leu Ser Leu Gln Trp Leu Tyr Ser Ala Arg Gly Asp Phe
515 520 525

Phe Arg Ala Thr Ser Arg Leu Thr Thr Asp Phe Gly Asn Ala Glu Lys
530 535 540

Thr Asp Arg Phe Val Met Lys Lys Leu Asn Asp Arg Val Met Arg Val
545 550 555 560

Glu Tyr His Phe Leu Ser Pro Tyr Val Ser Pro Lys Glu Ser Pro Phe
565 570 575

Arg His Val Phe Trp Gly Ser Gly Ser His Thr Leu Pro Ala Leu Leu
580 585 590

Glu Asn Leu Lys Leu Arg Lys Gln Asn Asn Gly Ala Phe Asn Glu Thr
595 600 605

Leu Phe Arg Asn Gln Leu Ala Leu Ala Thr Trp Thr Ile Gln Gly Ala
610 615 620

Ala Asn Ala Leu Ser Gly Asp Val Trp Asp Ile Asp Asn Glu Phe
625 630 635

<210> 19
<211> 639
<212> PRT
<213> Homo sapiens

<400> 19

Leu Tyr Trp Asp Asp Leu Lys Arg Lys Leu Ser Glu Lys Leu Asp Ser
1 5 10 15

Thr Asp Phe Thr Ser Thr Ile Lys Leu Leu Asn Glu Asn Ser Tyr Val
20 25 30

Pro Arg Glu Ala Gly Ser Gln Lys Asp Glu Asn Leu Ala Leu Tyr Val
35 40 45

Glu Asn Glu Phe Arg Glu Phe Lys Leu Ser Lys Val Trp Arg Asp Gln
50 55 60

His Phe Val Lys Ile Gln Val Lys Asp Ser Ala Gln Asn Ser Val Ile
65 70 75 80

Ile Val Asp Lys Asn Gly Arg Leu Val Tyr Leu Val Glu Asn Pro Gly
85 90 95

Gly Tyr Val Ala Tyr Ser Lys Ala Ala Thr Val Thr Gly Lys Leu Val
100 105 110

His Ala Asn Phe Gly Thr Lys Lys Asp Phe Glu Asp Leu Tyr Thr Pro
115 120 125

Val Asn Gly Ser Ile Val Ile Val Arg Ala Gly Lys Ile Thr Phe Ala
130 135 140

Glu Lys Val Ala Asn Ala Glu Ser Leu Asn Ala Ile Gly Val Leu Ile
145 150 155 160

Tyr Met Asp Gln Thr Lys Phe Pro Ile Val Asn Ala Glu Leu Ser Phe
165 170 175

Phe	Gly	His	Ala	His	Leu	Gly	Thr	Gly	Asp	Pro	Tyr	Thr	Pro	Gly	Phe	180	185	190	
Pro	Ser	Phe	Asn	His	Thr	Gln	Phe	Pro	Pro	Ser	Arg	Ser	Ser	Gly	Leu	195	200	205	
Pro	Asn	Ile	Pro	Val	Gln	Thr	Ile	Ser	Arg	Ala	Ala	Ala	Glu	Lys	Leu	210	215	220	
Phe	Gly	Asn	Met	Glu	Gly	Asp	Cys	Pro	Ser	Asp	Trp	Lys	Thr	Asp	Ser	225	230	235	240
Thr	Cys	Arg	Met	Val	Thr	Ser	Glu	Ser	Lys	Asn	Val	Lys	Leu	Thr	Val	245	250	255	
Ser	Asn	Val	Leu	Lys	Glu	Ile	Lys	Ile	Leu	Asn	Ile	Phe	Gly	Val	Ile	260	265	270	
Lys	Gly	Phe	Val	Glu	Pro	Asp	His	Tyr	Val	Val	Val	Gly	Ala	Gln	Arg	275	280	285	
Asp	Ala	Trp	Gly	Pro	Gly	Ala	Ala	Lys	Ser	Gly	Val	Gly	Thr	Ala	Leu	290	295	300	
Leu	Leu	Lys	Leu	Ala	Gln	Met	Phe	Ser	Asp	Met	Val	Leu	Lys	Asp	Gly	305	310	315	320
Phe	Gln	Pro	Ser	Arg	Ser	Ile	Ile	Phe	Ala	Ser	Trp	Ser	Ala	Gly	Asp	325	330	335	
Phe	Gly	Ser	Val	Gly	Ala	Thr	Glu	Trp	Leu	Glu	Gly	Tyr	Leu	Ser	Ser	340	345	350	
Leu	His	Leu	Lys	Ala	Phe	Thr	Tyr	Ile	Asn	Leu	Asp	Lys	Ala	Val	Leu	355	360	365	
Gly	Thr	Ser	Asn	Phe	Lys	Val	Ser	Ala	Ser	Pro	Leu	Leu	Tyr	Thr	Leu	370	375	380	
Ile	Glu	Lys	Thr	Met	Gln	Asn	Val	Lys	His	Pro	Val	Thr	Gly	Gln	Phe	385	390	395	400
Leu	Tyr	Gln	Asp	Ser	Asn	Trp	Ala	Ser	Lys	Val	Glu	Lys	Leu	Thr	Leu	405	410	415	

Asp Asn Ala Ala Phe Pro Phe Leu Ala Tyr Ser Gly Ile Pro Ala Val
420 425 430

Ser Phe Cys Phe Cys Glu Asp Thr Asp Tyr Pro Tyr Leu Gly Thr Thr
435 440 445

Met Asp Thr Tyr Lys Glu Leu Ile Glu Arg Ile Pro Glu Leu Asn Lys
450 455 460

Val Ala Arg Ala Ala Ala Glu Val Ala Gly Gln Phe Val Ile Lys Leu
465 470 475 480

Thr His Asp Val Glu Leu Asn Leu Asp Tyr Glu Glu Tyr Asn Ser Gln
485 490 495

Leu Leu Ser Phe Val Arg Asp Leu Asn Gln Tyr Arg Ala Asp Ile Lys
500 505 510

Glu Met Gly Leu Ser Leu Gln Trp Leu Tyr Ser Ala Arg Gly Asp Phe
515 520 525

Phe Arg Ala Thr Ser Arg Leu Thr Thr Asp Phe Gly Asn Ala Glu Lys
530 535 540

Thr Asp Arg Phe Val Met Lys Lys Leu Asn Asp Arg Val Met Arg Val
545 550 555 560

Glu Tyr His Phe Leu Ser Pro Tyr Val Ser Pro Lys Glu Ser Pro Phe
565 570 575

Arg His Val Phe Trp Gly Ser Gly Ser His Thr Leu Pro Ala Leu Leu
580 585 590

Glu Asn Leu Lys Leu Arg Lys Gln Asn Asn Gly Ala Phe Asn Glu Thr
595 600 605

Leu Phe Arg Asn Gln Leu Ala Leu Ala Thr Trp Thr Ile Gln Gly Ala
610 615 620

Ala Asn Ala Leu Ser Gly Asp Val Trp Asp Ile Asp Asn Glu Phe
625 630 635

<210> 20
<211> 639
<212> PRT
<213> Homo sapiens

<400> 20

Leu Tyr Trp Asp Asp Leu Lys Arg Lys Leu Ser Glu Lys Leu Asp Ser
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Thr Asp Phe Thr Ser Thr Ile Lys Leu Leu Asn Glu Asn Ser Tyr Val
20 25 30

Pro Arg Glu Ala Gly Ser Gln Lys Asp Glu Asn Leu Ala Leu Tyr Val
35 40 45

Glu Asn Glu Phe Arg Glu Phe Lys Leu Ser Lys Val Trp Arg Asp Gln
50 55 60

His Phe Val Lys Ile Gln Val Lys Asp Ser Ala Gln Asn Ser Val Ile
65 70 75 80

Ile Val Asp Lys Asn Gly Arg Leu Val Tyr Leu Val Glu Asn Pro Gly
85 90 95

Gly Tyr Val Ala Tyr Ser Lys Ala Ala Thr Val Thr Gly Lys Leu Val
100 105 110

His Ala Asn Phe Gly Thr Lys Lys Asp Phe Glu Asp Leu Tyr Thr Pro
115 120 125

Val Asn Gly Ser Ile Val Ile Val Arg Ala Gly Lys Ile Thr Phe Ala
130 135 140

Glu Lys Val Ala Asn Ala Glu Ser Leu Asn Ala Ile Gly Val Leu Ile
145 150 155 160

Tyr Met Asp Gln Thr Lys Phe Pro Ile Val Asn Ala Glu Leu Ser Phe
165 170 175

Phe Gly His Ala His Leu Gly Thr Gly Asp Pro Tyr Thr Pro Gly Phe
180 185 190

Pro Ser Phe Asn His Thr Gln Phe Pro Pro Ser Arg Ser Ser Gly Leu
195 200 205

Pro Asn Ile Pro Val Gln Thr Ile Ser Arg Ala Ala Ala Glu Lys Leu
210 215 220

Phe Gly Asn Met Glu Gly Asp Cys Pro Ser Asp Trp Lys Thr Asp Ser
225 230 235 240

Thr Cys Arg Met Val Thr Ser Glu Ser Lys Asn Val Lys Leu Thr Val
245 250 255

Ser Asn Val Leu Lys Glu Ile Lys Ile Leu Asn Ile Phe Gly Val Ile
260 265 270

Lys Gly Phe Val Glu Pro Asp His Tyr Val Val Val Gly Ala Gln Arg
275 280 285

Asp Ala Trp Gly Pro Gly Ala Ala Lys Ser Gly Val Gly Thr Ala Leu
290 295 300

Leu Leu Lys Leu Ala Gln Met Phe Ser Asp Met Val Leu Lys Asp Gly
305 310 315 320

Phe Gln Pro Ser Arg Ser Ile Ile Phe Ala Ser Trp Ser Ala Gly Asp
325 330 335

Phe Gly Ser Val Gly Ala Thr Glu Trp Leu Glu Gly Tyr Leu Ser Ser
340 345 350

Leu His Leu Lys Ala Phe Thr Tyr Ile Asn Leu Asp Lys Ala Val Leu
355 360 365

Gly Thr Ser Asn Phe Lys Val Ser Ala Ser Pro Leu Leu Tyr Thr Leu
370 375 380

Ile Glu Lys Thr Met Gln Asn Val Lys His Pro Val Thr Gly Gln Phe
385 390 395 400

Leu Tyr Gln Asp Ser Asn Trp Ala Ser Lys Val Glu Lys Leu Thr Leu
405 410 415

Asp Asn Ala Ala Phe Pro Phe Leu Ala Tyr Ser Gly Ile Pro Ala Val
420 425 430

Ser Phe Cys Phe Cys Glu Asp Thr Asp Tyr Pro Tyr Leu Gly Thr Thr
435 440 445

Met Asp Thr Tyr Lys Glu Leu Ile Glu Arg Ile Pro Glu Leu Asn Lys
450 455 460

Val Ala Arg Ala Ala Ala Glu Val Ala Gly Gln Phe Val Ile Lys Leu
465 470 475 480

Thr His Asp Val Glu Leu Asn Leu Asp Tyr Glu Glu Tyr Asn Ser Gln
485 490 495

Leu Leu Ser Phe Val Arg Asp Leu Asn Gln Tyr Arg Ala Asp Ile Lys
500 505 510

Glu Met Gly Leu Ser Leu Gln Trp Leu Tyr Ser Ala Arg Gly Asp Phe
515 520 525

Phe Arg Ala Thr Ser Arg Leu Thr Thr Asp Phe Gly Asn Ala Glu Lys
530 535 540

Thr Asp Arg Phe Val Met Lys Lys Leu Asn Asp Arg Val Met Arg Val
545 550 555 560

Glu Tyr His Phe Leu Ser Pro Tyr Val Ser Pro Lys Glu Ser Pro Phe
565 570 575

Arg His Val Phe Trp Gly Ser Gly Ser His Thr Leu Pro Ala Leu Leu
580 585 590

Glu Asn Leu Lys Leu Arg Lys Gln Asn Asn Gly Ala Phe Asn Glu Thr
595 600 605

Leu Phe Arg Asn Gln Leu Ala Leu Ala Thr Trp Thr Ile Gln Gly Ala
610 615 620

Ala Asn Ala Leu Ser Gly Asp Val Trp Asp Ile Asp Asn Glu Phe
625 630 635

<210> 21

<211> 639

<212> PRT

<213> Homo sapiens

<400> 21

Leu Tyr Trp Asp Asp Leu Lys Arg Lys Leu Ser Glu Lys Leu Asp Ser
1 5 10 15

Thr Asp Phe Thr Ser Thr Ile Lys Leu Leu Asn Glu Asn Ser Tyr Val
20 25 30

Pro Arg Glu Ala Gly Ser Gln Lys Asp Glu Asn Leu Ala Leu Tyr Val
35 40 45

Glu Asn Glu Phe Arg Glu Phe Lys Leu Ser Lys Val Trp Arg Asp Gln

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His	Phe	Val	Lys	Ile	Gln	Val	Lys	Asp	Ser	Ala	Gln	Asn	Ser	Val	Ile
65					70					75					80
Ile	Val	Asp	Lys	Asn	Gly	Arg	Leu	Val	Tyr	Leu	Val	Glu	Asn	Pro	Gly
				85					90					95	
Gly	Tyr	Val	Ala	Tyr	Ser	Lys	Ala	Ala	Thr	Val	Thr	Gly	Lys	Leu	Val
			100					105					110		
His	Ala	Asn	Phe	Gly	Thr	Lys	Lys	Asp	Phe	Glu	Asp	Leu	Tyr	Thr	Pro
		115					120					125			
Val	Asn	Gly	Ser	Ile	Val	Ile	Val	Arg	Ala	Gly	Lys	Ile	Thr	Phe	Ala
	130					135					140				
Glu	Lys	Val	Ala	Asn	Ala	Glu	Ser	Leu	Asn	Ala	Ile	Gly	Val	Leu	Ile
145				150					155						160
Tyr	Met	Asp	Gln	Thr	Lys	Phe	Pro	Ile	Val	Asn	Ala	Glu	Leu	Ser	Phe
			165						170					175	
Phe	Gly	His	Ala	His	Leu	Gly	Thr	Gly	Asp	Pro	Tyr	Thr	Pro	Gly	Phe
			180					185					190		
Pro	Ser	Phe	Asn	His	Thr	Gln	Phe	Pro	Pro	Ser	Arg	Ser	Ser	Gly	Leu
		195					200					205			
Pro	Asn	Ile	Pro	Val	Gln	Thr	Ile	Ser	Arg	Ala	Ala	Ala	Glu	Lys	Leu
	210					215					220				
Phe	Gly	Asn	Met	Glu	Gly	Asp	Cys	Pro	Ser	Asp	Trp	Lys	Thr	Asp	Ser
225				230					235					240	
Thr	Cys	Arg	Met	Val	Thr	Ser	Glu	Ser	Lys	Asn	Val	Lys	Leu	Thr	Val
			245						250				255		
Ser	Asn	Val	Leu	Lys	Glu	Ile	Lys	Ile	Leu	Asn	Ile	Phe	Gly	Val	Ile
		260					265					270			
Lys	Gly	Phe	Val	Glu	Pro	Asp	His	Tyr	Val	Val	Val	Gly	Ala	Gln	Arg
		275					280					285			
Asp	Ala	Trp	Gly	Pro	Gly	Ala	Ala	Lys	Ser	Gly	Val	Gly	Thr	Ala	Leu
	290					295					300				

Leu Leu Lys Leu Ala Gln Met Phe Ser Asp Met Val Leu Lys Asp Gly
305 310 315 320

Phe Gln Pro Ser Arg Ser Ile Ile Phe Ala Ser Trp Ser Ala Gly Asp
325 330 335

Phe Gly Ser Val Gly Ala Thr Glu Trp Leu Glu Gly Tyr Leu Ser Ser
340 345 350

Leu His Leu Lys Ala Phe Thr Tyr Ile Asn Leu Asp Lys Ala Val Leu
355 360 365

Gly Thr Ser Asn Phe Lys Val Ser Ala Ser Pro Leu Leu Tyr Thr Leu
370 375 380

Ile Glu Lys Thr Met Gln Asn Val Lys His Pro Val Thr Gly Gln Phe
385 390 395 400

Leu Tyr Gln Asp Ser Asn Trp Ala Ser Lys Val Glu Lys Leu Thr Leu
405 410 415

Asp Asn Ala Ala Phe Pro Phe Leu Ala Tyr Ser Gly Ile Pro Ala Val
420 425 430

Ser Phe Cys Phe Cys Glu Asp Thr Asp Tyr Pro Tyr Leu Gly Thr Thr
435 440 445

Met Asp Thr Tyr Lys Glu Leu Ile Glu Arg Ile Pro Glu Leu Asn Lys
450 455 460

Val Ala Arg Ala Ala Ala Glu Val Ala Gly Gln Phe Val Ile Lys Leu
465 470 475 480

Thr His Asp Val Glu Leu Asn Leu Asp Tyr Glu Glu Tyr Asn Ser Gln
485 490 495

Leu Leu Ser Phe Val Arg Asp Leu Asn Gln Tyr Arg Ala Asp Ile Lys
500 505 510

Glu Met Gly Leu Ser Leu Gln Trp Leu Tyr Ser Ala Arg Gly Asp Phe
515 520 525

Phe Arg Ala Thr Ser Arg Leu Thr Thr Asp Phe Gly Asn Ala Glu Lys
530 535 540

Thr Asp Arg Phe Val Met Lys Lys Leu Asn Asp Arg Val Met Arg Val
545 550 555 560

Glu Tyr His Phe Leu Ser Pro Tyr Val Ser Pro Lys Glu Ser Pro Phe
565 570 575

Arg His Val Phe Trp Gly Ser Gly Ser His Thr Leu Pro Ala Leu Leu
580 585 590

Glu Asn Leu Lys Leu Arg Lys Gln Asn Asn Gly Ala Phe Asn Glu Thr
595 600 605

Leu Phe Arg Asn Gln Leu Ala Leu Ala Thr Trp Thr Ile Gln Gly Ala
610 615 620

Ala Asn Ala Leu Ser Gly Asp Val Trp Asp Ile Asp Asn Glu Phe
625 630 635

<210> 22
<211> 63
<212> PRT
<213> Cavia porcellus

<400> 22

Lys Ile Thr Phe Ala Glu Lys Val Ala Asn Ala Glu Ser Leu Asn Ala
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Leu Gly Val Leu Ile Tyr Leu Asp Trp Thr Lys Phe Pro Ile Pro Lys
20 25 30

Ala Asp Leu Pro Val Phe Gly His Val His Leu Gly Thr Gly Asp Pro
35 40 45

Tyr Thr Pro Gly Phe Pro Ser Phe Asn His Thr Gln Phe Pro Pro
50 55 60

<210> 23
<211> 17
<212> PRT
<213> Homo sapiens

<400> 23

Arg Val Glu Tyr His Phe Leu Ser Pro Tyr Val Ser Pro Lys Glu Ser
1 5 10 15

Pro

<210> 24
<211> 15
<212> PRT
<213> Homo sapiens

<400> 24

Glu	Ser	Pro	Phe	Arg	His	Val	Phe	Trp	Gly	Ser	Gly	Ser	His	Thr
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<210> 25
<211> 23
<212> PRT
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<220>
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<223> Xaa can be any naturally occurring amino acid

<400> 25

Leu	Ala	Gly	Lys	Glu	Ser	Pro	Val	Val	Glu	Glu	Pro	Xaa	Glu	Asp	Phe
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Pro	Ala	Ala	Xaa	Arg	Leu	Thr
					20	

<210> 26
<211> 15
<212> PRT
<213> Homo sapiens

<400> 26

Phe	Pro	Ile	Val	Asn	Ala	Glu	Leu	Ser	Phe	Phe	Gly	His	Ala	His
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<210> 27
<211> 2283
<212> DNA
<213> Homo sapiens

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gctgtagatg aagaagaaaa tgctgacaat aacacaaagg ccaatgtcac. aaaacaaaaa 180

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ctggcaggaa	ccgagtcctc	agtgagggag	gagccaggag	aggacttccc	tgcagcacgt	360
cgcttatatt	gggatgacct	gaagagaaa	ttgtcggaga	aactggacag	cacagacttc	420
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gtctggcggt	atcaacattt	tggttaagatt	caggtcaaag	acagcgctca	aaactcgggt	600
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cactatgttg	tagttggggc	ccagagagat	gcatggggcc	ctggagctgc	aaaatccggt	1260
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taa						2283

<210> 28
 <211> 2283
 <212> DNA
 <213> Homo sapiens

<400> 28	
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gctgtagatg	aagaagaaaa tgctgacaat aacacaaaagg ccaatgtcac aaaacaaaaa 180
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atcatagttg	ataagaacgg tagacttggt tacctgggtg agaatcctgg gggttatgtg 660
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tctacatgta	ggatggtaac ctacagaaagc aagaatgtga agctcactgt gagcaatgtg 1140
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Pro Ile Ser Ala Asp Ser Ala Ile Met Asn Pro Ala Ser Lys Val Ile
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Ser Lys Met Lys Ala His Thr Met Thr Asp Asp Val Thr Phe Trp Lys

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Asp Arg Ala His Ile Ala Gln Leu Cys Glu Lys Ala Gly Leu Leu Gln
610 615 620

Arg Ala Leu Glu His Phe Thr Asp Leu Tyr Asp Ile Lys Arg Ala Val
625 630 635 640

Val His Thr His Leu Leu Asn Pro Glu Trp Leu Val Asn Tyr Phe Gly
645 650 655

Ser Leu Ser Val Glu Asp Ser Leu Glu Cys Leu Arg Ala Met Leu Ser
660 665 670

Ala Asn Ile Arg Gln Asn Leu Gln Ile Cys Val Gln Val Ala Ser Lys
675 680 685

Tyr His Glu Gln Leu Ser Thr Gln Ser Leu Ile Glu Leu Phe Glu Ser
690 695 700

Phe Lys Ser Phe Glu Gly Leu Phe Tyr Phe Leu Gly Ser Ile Val Asn
705 710 715 720

Phe Ser Gln Asp Pro Asp Val His Phe Lys Tyr Ile Gln Ala Ala Cys
725 730 735

Lys Thr Gly Gln Ile Lys Glu Val Glu Arg Ile Cys Arg Glu Ser Asn
740 745 750

Cys Tyr Asp Pro Glu Arg Val Lys Asn Phe Leu Lys Glu Ala Lys Leu
755 760 765

Thr Asp Gln Leu Pro Leu Ile Ile Val Cys Asp Arg Phe Asp Phe Val
770 775 780

His Asp Leu Val Leu Tyr Leu Tyr Arg Asn Asn Leu Gln Lys Tyr Ile
785 790 795 800

Glu Ile Tyr Val Gln Lys Val Asn Pro Ser Arg Leu Pro Val Val Ile
805 810 815

Gly Gly Leu Leu Asp Val Asp Cys Ser Glu Asp Val Ile Lys Asn Leu
820 825 830

Ile Leu Val Val Arg Gly Gln Phe Ser Thr Asp Glu Leu Val Ala Glu
835 840 845

Val Glu Lys Arg Asn Arg Leu Lys Leu Leu Leu Pro Trp Leu Glu Ala
850 855 860

Arg Ile His Glu Gly Cys Glu Glu Pro Ala Thr His Asn Ala Leu Ala
865 870 875 880

Lys Ile Tyr Ile Asp Ser Asn Asn Asn Pro Glu Arg Phe Leu Arg Glu
885 890 895

Asn Pro Tyr Tyr Asp Ser Arg Val Val Gly Lys Tyr Cys Glu Lys Arg
900 905 910

Asp Pro His Leu Ala Cys Val Ala Tyr Glu Arg Gly Gln Cys Asp Leu
915 920 925

Glu Leu Ile Asn Val Cys Asn Glu Asn Ser Leu Phe Lys Ser Leu Ser
930 935 940

Arg Tyr Leu Val Arg Arg Lys Asp Pro Glu Leu Trp Gly Ser Val Leu
945 950 955 960

Leu Glu Ser Asn Pro Tyr Arg Arg Pro Leu Ile Asp Gln Val Val Gln
965 970 975

Thr Ala Leu Ser Glu Thr Gln Asp Pro Glu Glu Val Ser Val Thr Val
980 985 990

Lys Ala Phe Met Thr Ala Asp Leu Pro Asn Glu Leu Ile Glu Leu Leu
995 1000 1005

Glu Lys Ile Val Leu Asp Asn Ser Val Phe Ser Glu His Arg Asn
1010 1015 1020

Leu Gln Asn Leu Leu Ile Leu Thr Ala Ile Lys Ala Asp Arg Thr
1025 1030 1035

Arg Val Met Glu Tyr Ile Asn Arg Leu Asp Asn Tyr Asp Ala Pro
1040 1045 1050

Asp Ile Ala Asn Ile Ala Ile Ser Asn Glu Leu Phe Glu Glu Ala
1055 1060 1065

Phe Ala Ile Phe Arg Lys Phe Asp Val Asn Thr Ser Ala Val Gln

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Val Leu Ile Glu His Ile Gly	Asn Leu Asp Arg Ala Tyr Glu Phe			
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Ala Glu Arg Cys Asn Glu Pro	Ala Val Trp Ser Gln Leu Ala Lys			
1100	1105		1110	
Ala Gln Leu Gln Lys Gly Met	Val Lys Glu Ala Ile Asp Ser Tyr			
1115	1120		1125	
Ile Lys Ala Asp Asp Pro Ser	Ser Tyr Met Glu Val Val Gln Ala			
1130	1135		1140	
Ala Asn Thr Ser Gly Asn Trp	Glu Glu Leu Val Lys Tyr Leu Gln			
1145	1150		1155	
Met Ala Arg Lys Lys Ala Arg	Glu Ser Tyr Val Glu Thr Glu Leu			
1160	1165		1170	
Ile Phe Ala Leu Ala Lys Thr	Asn Arg Leu Ala Glu Leu Glu Glu			
1175	1180		1185	
Phe Ile Asn Gly Pro Asn Asn	Ala His Ile Gln Gln Val Gly Asp			
1190	1195		1200	
Arg Cys Tyr Asp Glu Lys Met	Tyr Asp Ala Ala Lys Leu Leu Tyr			
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Asn Asn Val Ser Asn Phe Gly	Arg Leu Ala Ser Thr Leu Val His			
1220	1225		1230	
Leu Gly Glu Tyr Gln Ala Ala	Val Asp Gly Ala Arg Lys Ala Asn			
1235	1240		1245	
Ser Thr Arg Thr Trp Lys Glu	Val Cys Phe Ala Cys Val Asp Gly			
1250	1255		1260	
Lys Glu Phe Arg Leu Ala Gln	Met Cys Gly Leu His Ile Val Val			
1265	1270		1275	
His Ala Asp Glu Leu Glu Glu	Leu Ile Asn Tyr Tyr Gln Asp Arg			
1280	1285		1290	
Gly Tyr Phe Glu Glu Leu Ile	Thr Met Leu Glu Ala Ala Leu Gly			
1295	1300		1305	

Leu	Glu	Arg	Ala	His	Met	Gly	Met	Phe	Thr	Glu	Leu	Ala	Ile	Leu
1310						1315					1320			
Tyr	Ser	Lys	Phe	Lys	Pro	Gln	Lys	Met	Arg	Glu	His	Leu	Glu	Leu
1325						1330					1335			
Phe	Trp	Ser	Arg	Val	Asn	Ile	Pro	Lys	Val	Leu	Arg	Ala	Ala	Glu
1340						1345					1350			
Gln	Ala	His	Leu	Trp	Ala	Glu	Leu	Val	Phe	Leu	Tyr	Asp	Lys	Tyr
1355						1360					1365			
Glu	Glu	Tyr	Asp	Asn	Ala	Ile	Ile	Thr	Met	Met	Asn	His	Pro	Thr
1370						1375					1380			
Asp	Ala	Trp	Lys	Glu	Gly	Gln	Phe	Lys	Asp	Ile	Ile	Thr	Lys	Val
1385						1390					1395			
Ala	Asn	Val	Glu	Leu	Tyr	Tyr	Arg	Ala	Ile	Gln	Phe	Tyr	Leu	Glu
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Phe	Lys	Pro	Leu	Leu	Leu	Asn	Asp	Leu	Leu	Met	Val	Leu	Ser	Pro
1415						1420					1425			
Arg	Leu	Asp	His	Thr	Arg	Ala	Val	Asn	Tyr	Phe	Ser	Lys	Val	Lys
1430						1435					1440			
Gln	Leu	Pro	Leu	Val	Lys	Pro	Tyr	Leu	Arg	Ser	Val	Gln	Asn	His
1445						1450					1455			
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1460						1465					1470			
Glu	Glu	Asp	Tyr	Gln	Ala	Leu	Arg	Thr	Ser	Ile	Asp	Ala	Tyr	Asp
1475						1480					1485			
Asn	Phe	Asp	Asn	Ile	Ser	Leu	Ala	Gln	Arg	Leu	Glu	Lys	His	Glu
1490						1495					1500			
Leu	Ile	Glu	Phe	Arg	Arg	Ile	Ala	Ala	Tyr	Leu	Phe	Lys	Gly	Asn
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Asn	Arg	Trp	Lys	Gln	Ser	Val	Glu	Leu	Cys	Lys	Lys	Asp	Ser	Leu
1520						1525					1530			

Tyr Lys Asp Ala Met Gln Tyr Ala Ser Glu Ser Lys Asp Thr Glu
1535 1540 1545

Leu Ala Glu Glu Leu Leu Gln Trp Phe Leu Gln Glu Glu Lys Arg
1550 1555 1560

Glu Cys Phe Gly Ala Cys Leu Phe Thr Cys Tyr Asp Leu Leu Arg
1565 1570 1575

Pro Asp Val Val Leu Glu Thr Ala Trp Arg His Asn Ile Met Asp
1580 1585 1590

Phe Ala Met Pro Tyr Phe Ile Gln Val Met Lys Glu Tyr Leu Thr
1595 1600 1605

Lys Val Asp Lys Leu Asp Ala Ser Glu Ser Leu Arg Lys Glu Glu
1610 1615 1620

Glu Gln Ala Thr Glu Thr Gln Pro Ile Val Tyr Gly Gln Pro Gln
1625 1630 1635

Leu Met Leu Thr Ala Gly Pro Ser Val Ala Val Pro Pro Gln Ala
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Pro Phe Gly Tyr Gly Tyr Thr Ala Pro Pro Tyr Gly Gln Pro Gln
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Pro Gly Phe Gly Tyr Ser Met
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<211> 5028

<212> DNA

<213> Homo sapiens

<400> 35

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<210> 36
<211> 1657
<212> PRT
<213> Homo sapiens

<400> 36

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Tyr Gly Ser Val Leu Asp Asn Glu Arg Leu Thr Ala Glu Glu Met Asp
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Glu Arg Arg Arg Gln Asn Val Ala Tyr Glu Tyr Leu Cys His Leu Glu
35 40 45

Glu Ala Lys Arg Trp Met Glu Ala Cys Leu Gly Glu Asp Leu Pro Pro
50 55 60

Thr Thr Glu Leu Glu Glu Gly Leu Arg Asn Gly Val Tyr Leu Ala Lys
65 70 75 80

Leu Gly Asn Phe Phe Ser Pro Lys Val Val Ser Leu Lys Lys Ile Tyr

85					90					95					
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Thr	Asp	Asn	Val	Ile	Gln	Trp	Leu	Asn	Ala	Met	Asp	Glu	Ile	Gly	Leu
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Pro	Lys	Ile	Phe	Tyr	Pro	Glu	Thr	Thr	Asp	Ile	Tyr	Asp	Arg	Lys	Asn
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Met	Pro	Arg	Cys	Ile	Tyr	Cys	Ile	His	Ala	Leu	Ser	Leu	Tyr	Leu	Phe
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Lys	Leu	Gly	Leu	Ala	Pro	Gln	Ile	Gln	Asp	Leu	Tyr	Gly	Lys	Val	Asp
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Phe	Thr	Glu	Glu	Glu	Ile	Asn	Asn	Met	Lys	Thr	Glu	Leu	Glu	Lys	Tyr
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Gly	Ile	Gln	Met	Pro	Ala	Phe	Ser	Lys	Ile	Gly	Gly	Ile	Leu	Ala	Asn
		195					200					205			
Glu	Leu	Ser	Val	Asp	Glu	Ala	Ala	Leu	His	Ala	Ala	Val	Ile	Ala	Ile
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Asn	Glu	Ala	Ile	Asp	Arg	Arg	Ile	Pro	Ala	Asp	Thr	Phe	Ala	Ala	Leu
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Lys	Asn	Pro	Asn	Ala	Met	Leu	Val	Asn	Leu	Glu	Glu	Pro	Leu	Ala	Ser
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Thr	Tyr	Gln	Asp	Ile	Leu	Tyr	Gln	Ala	Lys	Gln	Asp	Lys	Met	Thr	Asn
			260					265					270		
Ala	Lys	Asn	Arg	Thr	Glu	Asn	Ser	Glu	Arg	Glu	Arg	Asp	Val	Tyr	Glu
		275					280					285			
Glu	Leu	Leu	Thr	Gln	Ala	Glu	Ile	Gln	Gly	Asn	Ile	Asn	Lys	Val	Asn
	290					295					300				
Thr	Phe	Ser	Ala	Leu	Ala	Asn	Ile	Asp	Leu	Ala	Leu	Glu	Gln	Gly	Asp
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Ala	Leu	Ala	Leu	Phe	Arg	Ala	Leu	Gln	Ser	Pro	Ala	Leu	Gly	Leu	Arg
			325						330					335	

Gly	Leu	Gln	Gln	Gln	Asn	Ser	Asp	Trp	Tyr	Leu	Lys	Gln	Leu	Leu	Ser	340	345	350	
Asp	Lys	Gln	Gln	Lys	Arg	Gln	Ser	Gly	Gln	Thr	Asp	Pro	Leu	Gln	Lys	355	360	365	
Glu	Glu	Leu	Gln	Ser	Gly	Val	Asp	Ala	Ala	Asn	Ser	Ala	Ala	Gln	Gln	370	375	380	
Tyr	Gln	Arg	Arg	Leu	Ala	Ala	Val	Ala	Leu	Ile	Asn	Ala	Ala	Ile	Gln	385	390	395	400
Lys	Gly	Val	Ala	Glu	Lys	Thr	Val	Leu	Glu	Leu	Met	Asn	Pro	Glu	Ala	405	410	415	
Gln	Leu	Pro	Gln	Val	Tyr	Pro	Phe	Ala	Ala	Asp	Leu	Tyr	Gln	Lys	Glu	420	425	430	
Leu	Ala	Thr	Leu	Gln	Arg	Gln	Ser	Pro	Glu	His	Asn	Leu	Thr	His	Pro	435	440	445	
Glu	Leu	Ser	Val	Ala	Val	Glu	Met	Leu	Ser	Ser	Val	Ala	Leu	Ile	Asn	450	455	460	
Arg	Ala	Leu	Glu	Ser	Gly	Asp	Val	Asn	Thr	Val	Trp	Lys	Gln	Leu	Ser	465	470	475	480
Ser	Ser	Val	Thr	Gly	Leu	Thr	Asn	Ile	Glu	Glu	Glu	Asn	Cys	Gln	Arg	485	490	495	
Tyr	Leu	Asp	Glu	Leu	Met	Lys	Leu	Lys	Ala	Gln	Ala	His	Ala	Glu	Asn	500	505	510	
Asn	Glu	Phe	Ile	Thr	Trp	Asn	Asp	Ile	Gln	Ala	Cys	Val	Asp	His	Val	515	520	525	
Asn	Leu	Val	Val	Gln	Glu	Glu	His	Glu	Arg	Ile	Leu	Ala	Ile	Gly	Leu	530	535	540	
Ile	Asn	Glu	Ala	Leu	Asp	Glu	Gly	Asp	Ala	Gln	Lys	Thr	Leu	Gln	Ala	545	550	555	560
Leu	Gln	Ile	Pro	Ala	Ala	Lys	Leu	Glu	Gly	Val	Leu	Ala	Glu	Val	Ala	565	570	575	

Gln His Tyr Gln Asp Thr Leu Ile Arg Ala Lys Arg Glu Lys Ala Gln
580 585 590

Glu Ile Gln Asp Glu Ser Ala Val Leu Trp Leu Asp Glu Ile Gln Gly
595 600 605

Gly Ile Trp Gln Ser Asn Lys Asp Thr Gln Glu Ala Gln Lys Phe Ala
610 615 620

Leu Gly Ile Phe Ala Ile Asn Glu Ala Val Glu Ser Gly Asp Val Gly
625 630 635 640

Lys Thr Leu Ser Ala Leu Arg Ser Pro Asp Val Gly Leu Tyr Gly Val
645 650 655

Ile Pro Glu Cys Gly Glu Thr Tyr His Ser Asp Leu Ala Glu Ala Lys
660 665 670

Lys Lys Lys Leu Ala Val Gly Asp Asn Asn Ser Lys Trp Val Lys His
675 680 685

Trp Val Lys Gly Gly Tyr Tyr Tyr Tyr His Asn Leu Glu Thr Gln Glu
690 695 700

Gly Gly Trp Asp Glu Pro Pro Asn Phe Val Gln Asn Ser Met Gln Leu
705 710 715 720

Ser Arg Glu Glu Ile Gln Ser Ser Ile Ser Gly Val Thr Ala Ala Tyr
725 730 735

Asn Arg Glu Gln Leu Trp Leu Ala Asn Glu Gly Leu Ile Thr Arg Leu
740 745 750

Gln Ala Arg Cys Arg Gly Tyr Leu Val Arg Gln Glu Phe Arg Ser Arg
755 760 765

Met Asn Phe Leu Lys Lys Gln Ile Pro Ala Ile Thr Cys Ile Gln Ser
770 775 780

Gln Trp Arg Gly Tyr Lys Gln Lys Lys Ala Tyr Gln Asp Arg Leu Ala
785 790 795 800

Tyr Leu Arg Ser His Lys Asp Glu Val Val Lys Ile Gln Ser Leu Ala
805 810 815

Arg Met His Gln Ala Arg Lys Arg Tyr Arg Asp Arg Leu Gln Tyr Phe
820 825 830

Arg Asp His Ile Asn Asp Ile Ile Lys Ile Gln Ala Phe Ile Arg Ala
835 840 845

Asn Lys Ala Arg Asp Asp Tyr Lys Thr Leu Ile Asn Ala Glu Asp Pro
850 855 860

Pro Met Val Val Val Arg Lys Phe Val His Leu Leu Asp Gln Ser Asp
865 870 875 880

Gln Asp Phe Gln Glu Glu Leu Asp Leu Met Lys Met Arg Glu Glu Val
885 890 895

Ile Thr Leu Ile Arg Ser Asn Gln Gln Leu Glu Asn Asp Leu Asn Leu
900 905 910

Met Asp Ile Lys Ile Gly Leu Leu Val Lys Asn Lys Ile Thr Leu Gln
915 920 925

Asp Val Val Ser His Ser Lys Lys Leu Thr Lys Lys Asn Lys Glu Gln
930 935 940

Leu Ser Asp Met Met Met Ile Asn Lys Gln Lys Gly Gly Leu Lys Ala
945 950 955 960

Leu Ser Lys Glu Lys Arg Glu Lys Leu Glu Ala Tyr Gln His Leu Phe
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Tyr Leu Leu Gln Thr Asn Pro Thr Tyr Leu Ala Lys Leu Ile Phe Gln
980 985 990

Met Pro Gln Asn Lys Ser Thr Lys Phe Met Asp Ser Val Ile Phe Thr
995 1000 1005

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Val Asn Gln Met Glu Ser Gln	Thr Gly Glu Ala Ser	Lys Leu Pro		
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Tyr Asp Val Thr Pro Glu Gln	Ala Leu Ala His Glu	Glu Val Lys		
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Thr Arg Leu Asp Ser Ser Ile	Arg Asn Met Arg Ala	Val Thr Asp		
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Lys Phe Leu Ser Ala Ile Val	Ser Ser Val Asp Lys	Ile Pro Tyr		
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Gly Met Arg Phe Ile Ala Lys	Val Leu Lys Asp Ser	Leu His Glu		
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Lys Phe Pro Asp Ala Gly Glu	Asp Glu Leu Leu Lys	Ile Ile Gly		
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His Ala Ala Ser Asn Lys Met	Phe Leu Gly Asp Asn	Ala His Leu		
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Phe Asn Val Asp Glu Tyr Ser	Asp Leu Val Thr Leu	Thr Lys Pro		
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Glu	Ala	Leu	Ala	Lys	Thr	Glu	Val	Ser	Leu	Thr	Leu	Thr	Asn	Lys
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Gln Leu Gln Tyr Glu Gly Val Ala Val Met Lys Leu Phe Asp Arg
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Phe Tyr Gly Lys
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<211> 4974

<212> DNA

<213> Homo sapiens

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<212> PRT
<213> Homo sapiens

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<400> 38

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Tyr Ser Asn Lys Glu Ile Phe Leu Arg Glu Leu Ile Ser Asn Ala Ser
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Asp Ala Leu Asp Lys Ile Arg Tyr Glu Ser Leu Thr Asp Pro Ser Lys
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Leu Asp Ser Gly Lys Glu Leu Lys Ile Asp Ile Ile Pro Asn Pro Gln
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Glu Arg Thr Leu Thr Leu Val Asp Thr Gly Ile Gly Met Thr Lys Ala
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145 150 155 160

Ala Gly Gly Ser Phe Thr Val Arg Ala Asp His Gly Glu Pro Ile Gly
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Arg Gly Thr Lys Val Ile Leu His Leu Lys Glu Asp Gln Thr Glu Tyr
180 185 190

Leu Glu Glu Arg Arg Val Lys Glu Val Val Lys Lys His Ser Gln Phe
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210 215 220

Ile Ser Asp Asp Glu Ala Glu Glu Glu Lys Gly Glu Lys Glu Glu Glu
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Asp Lys Asp Asp Glu Glu Lys Pro Lys Ile Glu Asp Val Gly Ser Asp
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260 265 270

Lys Glu Lys Tyr Ile Asp Gln Glu Glu Leu Asn Lys Thr Lys Pro Ile
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305 310 315 320

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Arg Arg Ala Pro Phe Asp Leu Phe Glu Asn Lys Lys Lys Lys Asn Asn
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Phe Ser Lys Asn Leu Lys Leu Gly Ile His Glu Asp Ser Thr Asn Arg
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Arg Arg Leu Ser Glu Leu Leu Arg Tyr His Thr Ser Gln Ser Gly Asp
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Lys Ser Ile Tyr Tyr Ile Thr Gly Glu Ser Lys Glu Gln Val Ala Asn
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Ser Ala Phe Val Glu Arg Val Arg Lys Arg Gly Phe Glu Val Val Tyr
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Met Thr Glu Pro Ile Asp Glu Tyr Cys Val Gln Gln Leu Lys Glu Phe
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Asp Gly Lys Ser Leu Val Ser Val Thr Lys Glu Gly Leu Glu Leu Pro
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Glu Asp Glu Glu Glu Lys Lys Lys Met Glu Glu Ser Lys Ala Lys Phe
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Lys Ala Glu Ala Asp Lys Asn Asp Lys Ala Val Lys Asp Leu Val Val 645 650 655		
Leu Leu Phe Glu Thr Ala Leu Leu Ser Ser Gly Phe Ser Leu Glu Asp 660 665 670		
Pro Gln Thr His Ser Asn Arg Ile Tyr Arg Met Ile Lys Leu Gly Leu 675 680 685		
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Val Gln Val Asp Gly Trp Lys
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